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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON D.C., 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

April 21, 2010

MEMORANDUM

SUBJECT: Drinking Water Assessment for the IR-4 Registration of Chlorothalonil (Bravo Weather Stick®, 54%) and the Degradation Product, 4-Hydroxy-2,5,6-trichloro-1,3-dicyanobenzene (SDS-3701) for the New Uses On: Bulb Vegetables, Bushberries, and Low Growing Berries. (**PC Code: 081901; DP Barcode: 370488**)

FROM:

Rochelle F. H. Bohaty Ph.D., Chemist
Environmental Risk Branch 3
Environmental Fate and Effects Division (7507P)

REVIEWED BY:

James Hetrick, Ph.D., Senior Science Advisor
Environmental Risk Branch 3
Environmental Fate and Effects Division (7507P)

APPROVED BY:

Dana Spatz, Branch Chief
Environmental Risk Branch 3
Environmental Fate and Effects Division (7507P)

TO:

William Greear
Health Effects Division/ Risk Assessment Branch 1

Barbara Madden, Risk Manager
Sidney Jackson, Risk Manager Reviewer
Risk Integration, Minor Use & Emergency Response Branch
Registration Division (7505P)

EXECUTIVE SUMMARY

This memorandum provides a drinking water assessment (DWA) for the IR-4 registration of chlorothalonil (Bravo Weather Stick®; EPA Reg. # 50534-188-100) use on bulb vegetables (crop subgroups 3-07A and 3-07B), bushberry (crop subgroup 13-07B), and low growing berry (crop subgroup 13-07G). Members of the bulb vegetable subgroup and the low growing berry

subgroup are already registered including: blueberry, cranberry, onions (dry bulb and green), potato, and strawberry.

In summary, Tier II EDWCs for total toxic chlorothalonil residues are not expected to exceed 316 µg/L for the 1 in 10 year peak concentration, 6 µg/L for the 1 in 10 year annual average concentration, and 3 µg/L for the 30 year annual average from applications. These EDWCs are recommended for use in future assessments conducted by the Health Effects Division.

EDWC in ground water resulting from the proposed chlorothalonil uses is not expected to be >0.7 µg/L. Tier I EDWCs in ground water have also been revised for turf and horseradish. The revised values are provided in **Supplement B**. Chlorothalonil use on golf course greens give the most conservative ground water EDWC—3.5 µg/L. The revised ground water EDWC is higher than previously reported estimates. Ground water EDWC from chlorothalonil use is not expected to exceed 3.5 µg/L. This value is recommended for use in future assessments conducted by the Health Effects Division.

This DWA takes into account chlorothalonil and a degradation product of toxicological concern, 4-hydroxy-2,5,6-trichloro-1,3-dicyanobenzene (SDS-3701). These compounds are referred to collectively as total toxic chlorothalonil residues and their structures are shown in **Appendix A**. This DWA is based on Tier II surface water and Tier I ground water model simulations.

Input parameters have been updated from previous DWAs and include data from three recently reviewed studies—two supplemental aerobic soil metabolism studies (MRIDs 43879601 and 47207702) and one supplemental adsorption/desportion study (MRID 44483405). All previously used input parameters were reevaluated to ensure accuracy and compliance with current input parameter guidance. Specific input parameter changes are discussed in **Supplement A**.

Because of changes to the input parameters, crops previously determined to give high estimated drinking water concentrations (EDWCs) resulting from chlorothalonil uses have been remodeled using current label application rates (i.e. horseradish and turf). Updated EDWCs are given in **Supplement B**. Chlorothalonil uses on horseradish give the highest surface water EDWCs of the remolded crops. The revised Tier II EDWCs for horseradish are lower than previously reported estimates (DP Barcode 346321). Values are compared in **Table 1**.

Table 1: Tier II PCA Corrected Surface Water EDWCs of Total Toxic Chlorothalonil Residues.

Crop	Scenario (application date)	Peak EDWC µg/L (ppb)	Yearly Mean µg/L (ppb)	Average of Yearly Means µg/L (ppb)
Horseradish	FL Carrot 25/10	316	5	3
	<i>Previous FL Carrot 25/10</i>	443	68	36
Bulb Vegetables	GA Onions 1/16	159	6	3
	NC Sweet Potato	223	3.2	1.9

* Bold font indicates the highest estimated value.

The EDWCs for the proposed chlorothalonil uses on bulb vegetables, bushberries, and low growing berries are lower than previously reported values. Note that, one bulb vegetable scenario—Georgia Onions—gives a higher 1 in 10 year annual average concentration and a higher 30 year annual average concentration than the revised values for chlorothalonil use on horseradish. These estimations are below previously reported values as highlighted in **Table 1**.

PROBLEM FORMULATION

Chlorothalonil is a broad spectrum, non-systemic protectant pesticide mainly used as a fungicide to control fungal foliar diseases of vegetable, field, and ornamental crops. The exact mechanism of action is unknown; however, chlorothalonil is believed to combine with glutathione in fungal cells tying up available glutathione.

Use Characterization

The uses being assessed for the proposed IR-4 registration include: bulb vegetables (crop subgroups 3-07A and 3-07B), bushberry (crop subgroup 13-07B), and low growing berry (crop subgroup 13-07G). The proposed application rates of chlorothalonil are listed in **Table 2**.

Currently, chlorothalonil is approved for use on a number of other agricultural commodities including: almond, apricot, asparagus, banana, bean (dry), bean (snap, succulent), brassica head, broccoli, brussels sprouts, cabbage, carrot, cauliflower, celery, cherry (sweet and tart), cocoa bean, coffee bean, corn (sweet), cucumber, ginseng, horseradish, lentils, lupin, mango, melon, mushroom, nectarine, okra, papaya, parsnip (root), passion fruit, pea (edible-podded), peach, peanut, persimmon, pistachio, plum (fresh and prune), pumpkin, rhubarb, soybean, squash (summer and winter), tomato, and yam. Chlorothalonil is also registered for use on golf courses, lawns around commercial and industrial buildings, and other turfgrass such as professional and collegiate athletic fields.

The geographic extent of the proposed new uses of chlorothalonil are widespread, as well as the uses already registered for chlorothalonil. The 2002 USGS pesticide use map for chlorothalonil

shown in **Figure 1** reveals intensive agricultural use along the East Coast, in the Southeast, California Central Valley, and throughout Texas and the Upper Midwest.¹

Previous Drinking Water Assessments

Several DWAs have been completed for Chlorothalonil. Past chlorothalonil registrations have depended on Tier I ground water and Tier II surface water modeling.

In response to the 2008 IR-4 registration of chlorothalonil (Bravo Weather Stick®, 54%) for new uses on: fruiting vegetables, cucurbit vegetables, okra, persimmon, horseradish, rhubarb, ginseng, yam, lupin, lentils, brassica head, and stem vegetables, a DWA was completed (DP Barcode 346321). This assessment determined that chlorothalonil use on horseradish gave the most conservative Tier II surface water EDWCs. These EDWCs have been used in subsequent chlorothalonil assessments and are shown in **Table 1**. Note that, past DWA conducted for

¹ http://water.usgs.gov/nawqa/pnsp/usage/maps/show_map.php?year=02&map=m5007

Table 2: Proposed Application Rates for Chlorothalonil Use on Bulb Vegetables, Bushberries, and Low Growing Berries.

Crop	Application Rate Range (lbs a.i./A)	Maximum Single Application Rate (lbs a.i./A)	Maximum Application Rate Per Growing Season (lbs a.i./A)	Maximum Number of Applications ^a	Minimum Interval	Application Technique
Bulb Vegetables ^b (3-07A and 3-07B)	0.75-2.25	2.25 2.5 kg a.i./ha	15	7 ^c	7 days	Aerial/Chemigation/Ground
Bushberry (13-07B)	2.25-3.0	3.0	9.0	3	10 days	Aerial/Chemigation/Ground
Low Growing Berry (13-07G)	1.125-1.5	1.5 1.7 kg a.i./ha	4.5	3	7 days	Aerial/Ground

a. Values are based on maximum single application rates.

b. The max application rate per growing season for green onions is 6.75 lbs a.i./A (7.4 kg a.i./ha).

c. Six applications at 2.25 lbs a.i./A (2.5 kg a.i./ha) and one at 1.5 lbs a.i./A (1.7 kg a.i./ha).

CHLOROTHALONIL - fungicide
2002 estimated annual agricultural use

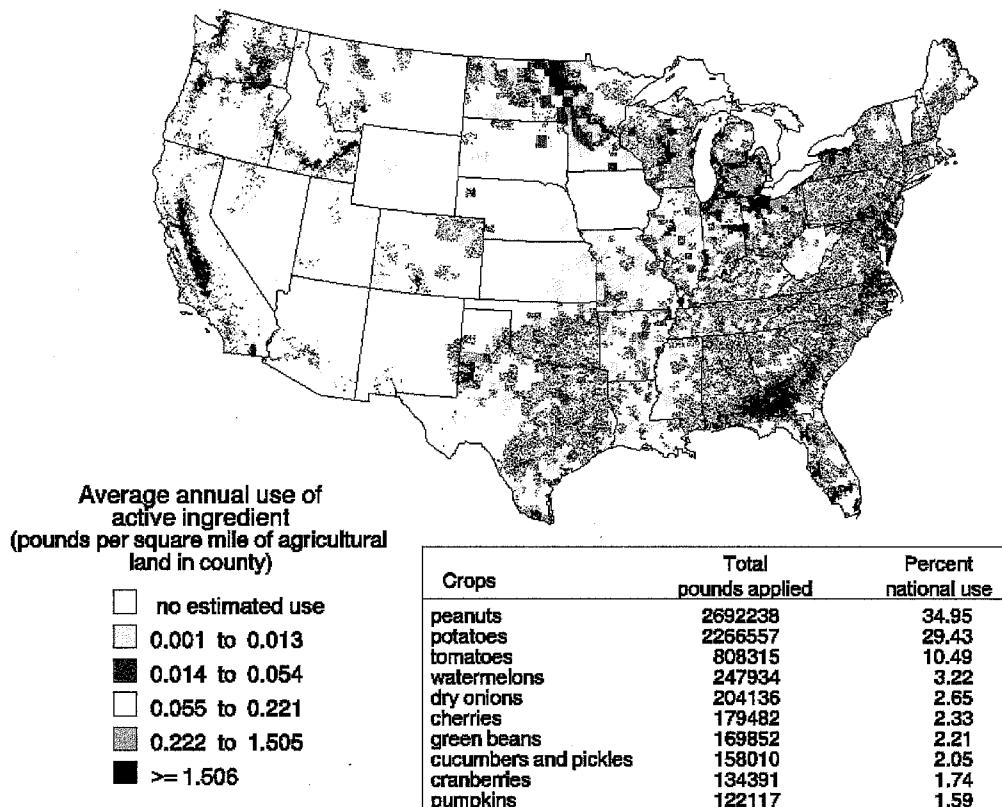


Figure 1: 2002 USGS National Pesticide Use Map.¹

chlorothalonil uses on turf also yield high EDWCs; however, turf application rates have been reduced in recent years.

Environmental Fate Assessment

Based on laboratory studies, chlorothalonil is mobile in terrestrial and aquatic environments. It degrades primarily through aqueous photolysis in clear, shallow water. Chlorothalonil is also susceptible to microbial-mediated degradation, with degradation rates often departing from first-order kinetics. Degradation rates appear to be dependent on the application rate. Aerobic soil metabolism studies indicate that higher chlorothalonil application rates yield slower degradation rates. Chlorothalonil is rapidly metabolized in water/sediment systems under both aerobic and

anaerobic conditions. Field dissipation studies show that chlorothalonil degrades with half-lives ranging from 33 to 81 days. In a few field dissipation studies chlorothalonil was observed in soil samples taken after one year. Key physical, chemical, and environmental fate properties of chlorothalonil are summarized in **Table 3**.

A major metabolite, 4-hydroxy-2,5,6-trichloro-1,3-dicyanobenzene (SDS-3701), is considered to be of toxicological concern. It is known to form under various test conditions. Laboratory studies indicate that SDS-3701 also degrades through microbial-mediated processes. The chemical structure of SDS-3701 is provided in **Appendix A**. Known physical, chemical, and environmental fate properties of SDS-3701 are provided in **Table 3**.

Other chlorothalonil degradation products exhibit a degree of persistence. However, to date, these degradates have not been identified as being of toxicological concern. Evolution of volatile compounds including carbon dioxide is not significant in most submitted studies.

Conceptual Model

It is believed that chlorothalonil may reach surface waters through spray drift and penetration of the canopy during application and foliar wash off to the soil. Soil to which chlorothalonil is adsorbed to may be transported to surface water sources via runoff. Both chlorothalonil and SDS-3701 are moderately mobile in soil. In addition, these compounds have shown some persistence in field dissipation studies, which increases the likelihood that both of these compounds may leach into ground water. Probable dissipation routes of total toxic chlorothalonil residues are illustrated in the general pesticide dissipation schematic provided in **Figure 2**.

Analysis

Tier II EDWCs for the proposed new uses of chlorothalonil on bulb vegetables, bushberries, and low growing berries are calculated using PRZM (Pesticide Root Zone Model, version 3.12.3, June 2006) and EXAMS (EXposure Analysis Modeling System, version 2.98.04.06, April 2005) models in the PE5 shell. PRZM is used to simulate pesticide transport as a result of runoff and erosion from an agricultural field. EXAMS estimates environmental fate and transport of pesticides in surface water. All Tier II modeling was corrected for percent cropped area (PCA), an adjustment factor that accounts for the area within the watershed that is planted with the modeled crop, to estimate the surface water EDWCs. A default PCA value of 87% was used for the proposed uses to account for use on multiple crops.

Tier I groundwater EDWCs are estimated using SCI-GROW (Screening Concentration in Groundwater, version 2.3, August 8, 2003).

Table 3: Key Environmental Fate Data for Chlorothalonil and its degradate, SDS-3701, Along With The Input Parameters Used in SCI-GROW and PRZM-EXAM Modeling to Estimate Total Toxic Chlorothalonil Residue Concentrations in Ground and Surface Waters, Respectively, Resulting From the Proposed New Uses on Bulb Vegetables, Bushberries, and Low Growing Berries.

Parameter	Chlorothalonil	SDS-3701	Total Toxic Residue (Chlorothalonil + SDS-3701)	Value Used in Current Assessment	Source
Molecular Weight	265.9 g/mol	247.5 g/mol	not applicable	265.9 g/mol	Chlorothalonil: RED, EPA 738-R-99004, April, 1999 SDS-3701: ChemDraw Ultra calculation
Water Solubility (25 °C)	0.8 mg/L	not reported	not applicable	0.8 mg/L	Chlorothalonil: RED, EPA 738-R-99004, April, 1999
Vapor Pressure	5.72×10^{-7} torr	not reported	not applicable	5.72×10^{-7} torr	Chlorothalonil: MRID 00153732
Henry's Law Constant	2.6×10^{-7} atm - m^3/mol	not reported	not applicable	2.6×10^{-7} atm - m^3/mol	Chlorothalonil: RED, EPA 738-R-99004, April, 1999
Hydrolysis Half-life ($t_{1/2}$) pH 7	Stable, 0	not reported	not applicable	Stable, 0	Chlorothalonil: MRID 0040539
Aquatic Photolysis Half-life ($t_{1/2}$) pH 7	10 hours	not calculated	0.46 days 11 hours	PRZM-EXAMS: 0.5 days (11 hours)	Chlorothalonil & Total Toxic Residues: MRID 45710223
Soil Partition Coefficient (K_{oc})	6872, 2677, 1527, 5642, 5015, 2505 mL/g	2114, 628, 343, 328, 321, 263, 219, and 213 mL/g	not applicable	SCI-GROW: 213 mL/g lowest value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g PRZM-EXAMS: 554 mean value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g	Chlorothalonil: EPA Acc. 29406 SDS-3701: 44483405 and 46786901
Aerobic Soil Metabolism Half-life ($t_{1/2}$)	57, 22, 18, 15, 14, 10, 10, 5, 2, 1, 1, 1.0, 0.5, 0.3 days	not calculated	87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days	SCI-GROW: 13 days median value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days PRZM-EXAMS: 33 days upper 90 th percentile confidence	Total Toxic Residues: MRIDs 00040547, 00087351 (parent only), 43879601, 47207702, and 47207703

				bound on the mean value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days; $24 + ((1.282 \times 31) / \sqrt{14}) = 33$ days	
Aerobic Aquatic Metabolism Half-life ($t_{1/2}$)	2.6, 1.4, 0.8, 0.3, 0.1, and 0.1 days	not calculated	3.1, 0.8, 0.3, 0.2, 0.1, and 0.1 days	PRZM-EXAMS: 1.5 days upper 90 th percentile confidence bound on the mean value of 3.1, 0.8, 0.3, 0.2, 0.1, and 0.1 days; $0.75 + ((1.476 \times 1.18) / \sqrt{6}) = 1.5$ days	Total Toxic Residues: MRIDs 42226101, 45908001, and 47207701
Anaerobic Aquatic Metabolism Half-life ($t_{1/2}$)	8.9 and 4.8 days	not calculated	83 and 18 days	PRZM-EXAMS: 151 days upper 90 th percentile confidence bound on mean value of 83 and 18 days; $50.5 + ((3.078 \times 46) / \sqrt{2}) = 151$ day.	Total Toxic Residues: MRID 00147975
Terrestrial Field Dissipation	80.6, 73.7, 73.7, 58.2, 57.7, 56.4, 49.5, 45.9, and 33.3 days	not calculated	not calculated	not applicable	Chlorothalonil: MRIDs 000127861, 000071627, 00087369, 00087332, 00087301
Application Type and Depth of Incorporation	aerial application, 0				EFED Guidance
Spray Drift Fraction	0.16 (aerial)				EFED Guidance
Application Efficiency	0.95 (aerial)				EFED Guidance
PCA value	87% (multiple crops)				EFED Guidance
Application Rate ^a	Bulb Vegetables SCI-GROW: 20 applications at 0.75 lbs a.i./A PRZM-EXAMS: 6 applications at 2.25 lbs a.i./A (2.5 kg a.i./ha) and 1 application at 1.5 lbs a.i./A (1.7 kg a.i./ha) Range: 6-20 applications at 2.25 to 0.75 lbs a.i./A, respectively Bushberry SCI-GROW: 3 applications at 3 lbs a.i./A PRZM-EXAMS: 3 applications at 3 lbs a.i./A (3.4 kg a.i./ha) Range: 3-4 applications at 3 to 2.25 lbs a.i./A, respectively				Proposed Label
	Low Growing Berry SCI-GROW: 3 applications at 1.5 lbs a.i./A				

	PRZM-EXAMS: 3 applications at 1.5 lbs a.i./A (1.7 kg a.i./ha) Range: 3-4 applications at 1.5 to 1.125 lbs a.i./A, respectively																											
Interval Between Applications	<p style="text-align: center;">Bulb Vegetables 7 days</p> <p style="text-align: center;">Bushberry 10 days</p> <p style="text-align: center;">Low Growing Berry 7 days</p>	Proposed Label																										
Date of First Application (DD/MM)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; background-color: #cccccc;">Bulb Vegetables</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">CA Onion</td> <td style="text-align: right;">16/01</td> </tr> <tr> <td style="padding-left: 20px;">GA Onions</td> <td style="text-align: right;">16/01</td> </tr> <tr> <td style="padding-left: 20px;">IDN Potato</td> <td style="text-align: right;">01/06</td> </tr> <tr> <td style="padding-left: 20px;">ME Potato</td> <td style="text-align: right;">01/06</td> </tr> <tr> <td style="padding-left: 20px;">NC Sweet Potato</td> <td style="text-align: right;">15/05</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; background-color: #cccccc;">Bushberry</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">CA Fruit</td> <td style="text-align: right;">15/10</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center; background-color: #cccccc;">Low Growing Berry</th> </tr> </thead> <tbody> <tr> <td style="padding-left: 20px;">CA Fruit</td> <td style="text-align: right;">15/10</td> </tr> <tr> <td style="padding-left: 20px;">CA Grapes</td> <td style="text-align: right;">15/03</td> </tr> <tr> <td style="padding-left: 20px;">FL Strawberry</td> <td style="text-align: right;">15/10</td> </tr> <tr> <td style="padding-left: 20px;">NY Grapes</td> <td style="text-align: right;">15/07</td> </tr> </tbody> </table>	Bulb Vegetables		CA Onion	16/01	GA Onions	16/01	IDN Potato	01/06	ME Potato	01/06	NC Sweet Potato	15/05	Bushberry		CA Fruit	15/10	Low Growing Berry		CA Fruit	15/10	CA Grapes	15/03	FL Strawberry	15/10	NY Grapes	15/07	Proposed Label Location Specific Crop Profiles
Bulb Vegetables																												
CA Onion	16/01																											
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CA Grapes	15/03																											
FL Strawberry	15/10																											
NY Grapes	15/07																											

a. Values used are based on maximum single application rate except for bulb vegetables. The proposed label allows six applications at 2.25 lbs a.i./A (2.5 kg a.i./ha) with one additional application at 1.5 lbs a.i./A (1.7 kg a.i./ha). SCI-GROW does not permit different application rates to be used for estimating the concentration of total toxic chlorothalonil residues in groundwater. SCI-GROW estimations are based on cumulative applications so using the lower application rate with more applications does not effect the estimated concentration of total toxic chlorothalonil residues in groundwater.

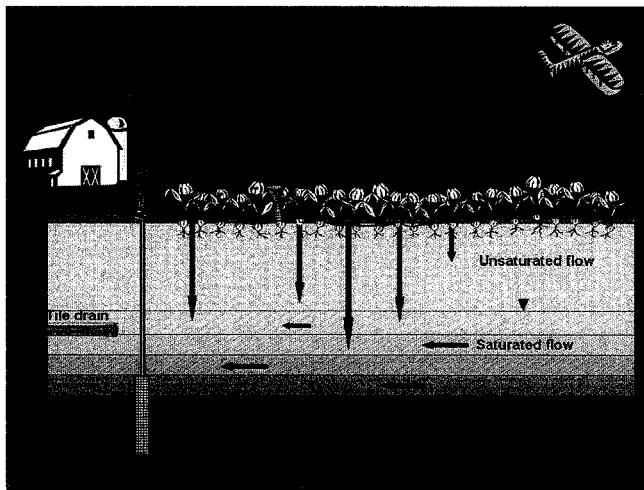


Figure 2: Probable Routes of Pesticide Dissipation in the Environment.

Selecting Input Parameters

The input parameters used in this drinking water assessment are selected from the environmental fate data submitted by several registrants in accordance with US EPA-OPP EFED water model parameter guidance.²

This DWA uses revised input parameters to incorporate all scientifically available data including three recently reviewed studies—two supplemental aerobic soil metabolism studies (MRIDs 43879601 and 47207702) and one supplemental adsorption/desorption study (MRID 44483405). Furthermore, all previously used input parameters were reevaluated to ensure accuracy and compliance with current input parameter guidance. An explanation for each of the input parameter revisions is provided in **Supplement A**. Input values used in the model runs for this DWA are shown in **Table 3**.

One important uncertainty to consider in this assessment related to the input parameters is that aerobic soil metabolism rates depend on the application rate—higher chlorothalonil applications rates give slower degradation (MRIDs 4379601 and 47207702). Application rates for acceptable and supplemental studies range from 1 to 39 mg a.i./kg with half-lives ranging from 1 to 80 days, respectively. Because no studies have been submitted that use the highest “current” chlorothalonil application rate, 11.3 lbs a.i./a for the maximum single application rate and 73 lbs a.i./a for the season maximum application rate registered for golf course greens, all available half-life values were taken into account in this assessment.

² *Guidance for Selecting Input Parameters in Modeling the Environmental Fate and Transport of Pesticides*, Version 2.1, October 22, 2009.

The input values used in this DWA are based on total toxic chlorothalonil residues, chlorothalonil and its degradate SDS-3701. This approach requires revisiting each relevant environmental fate study (hydrolysis, aqueous photolysis, aerobic soil metabolism, etc.) in order to calculate the amount of chlorothalonil and SDS-3701 present in each study at each sampling interval. The total concentrations are used to recalculate the rate constant and half-life value for each study. These results are then used to calculate input values for modeling the total toxic chlorothalonil residues. Input values, as well as the half-lives used to calculate such values are provided in **Table 3**. If data are available for both chlorothalonil and SDS-3701 and the data cannot be combined, the most conservative values are used. For instance, data indicate that SDS-3701 is more mobile than chlorothalonil; therefore, data for SDS-3701 is used to calculate the partition coefficient (K_{oc}) input value. When there is no data available for SDS-3701, input values are assumed to be equivalent to the parent value. For example, the solubility of the total toxic residue is assumed to be equivalent to the solubility of chlorothalonil.

When more than one standard scenario exists for a given crop-subgroup all are modeled. Standard scenarios, the scenario locations, and first application dates used for this assessment are provided in **Table 3**. When standard scenarios are not available for a particular crop-subgroup, surrogate scenarios are chosen with the help of the draft scenario crop group guidance document.³

Surface Water

Tier II chlorothalonil EDWCs for the proposed uses on bulb vegetables, bushberries, and low growing berries are listed in **Table 4**. The model output files are provided in **Appendix B**. The updated surface water EDWCs for chlorothalonil use on turf and horseradish, previously determined uses that give high EDWCs, are highlighted in **Supplement B**. Uses on horseradish give the highest EDWCs of the remodeled crops. These data are provided in **Table 4**. There is one bulb vegetable scenario—Georgia Onions—that gives a higher 1 in 10 year peak concentration and a 30 year annual average concentration than the revised value for chlorothalonil use on horseradish. In summary, Tier II EDWCs for total toxic chlorothalonil residues are not expected to exceed 316 µg/L for the 1 in 10 year peak concentration, 6 µg/L for the 1 in 10 year annual average concentration, and 3 µg/L for the 30 year annual average from chlorothalonil applications. These EDWCs should be used in future assessments conducted by the Health Effects Division.

Groundwater

Tier I EDWCs for the proposed chlorothalonil uses on bulb vegetables, bushberries, and low growing berries are listed in **Table 5**. The model output files are provided in **Appendix B**. These values are lower than previously reported estimates for horseradish. The updated ground water EDWCs for chlorothalonil use on horseradish and turf are listed in **Supplement B**. The

³ G:\Teams and Panels\Tech Teams\Water Quality-Exposure(WQTT)\IR-4 Crop Group Documents\Draft EFED Subgroup Materials\ Scenario Crop Groups (draft)

Table 5: Tier II Surface Water PCA Corrected EDWCs For Total Toxic Chlorothalonil Residues from the Proposed New Uses on Bulb Vegetables, Bushberries, and Low Growing Berries.

Crop	Scenario	Peak EDWC µg/L (ppb)	Yearly Mean µg/L (ppb)	Average of Yearly Means µg/L (ppb)
Bulb Vegetables ¹ (3-07A and 3-07B)	CA Onion	47	1.9	1.5
	GA Onions	159	5.7	3.2
	IDN Potato	24	1.5	1.3
	ME Potato	83	3.0	2.0
	NC Sweet Potato	223	3.2	1.9
Bushberry (13-07B)	CA Fruit	36	1.2	0.8
Low Growing Berry (13-07G)	CA Fruit	18	<1	<1
	CA Grapes	15	<1	<1
	FL Strawberry	73	1.0	<1
	NY Grapes	53	1.2	<1
Horseradish	FL Carrot	316	5.0	2.8

* Bold font indicates highest values

highest EDWCs for the chlorothalonil use is on golf course greens. The highest value for such use is 3.5 µg/mL which is also listed in **Table 6**. The EDWC for the proposed chlorothalonil uses on bulb vegetables, bushberries, and low growing berries is not expected to be >0.7 µg/mL. In general, EDWCs for total toxic chlorothalonil residues in ground water resulting from registered or the proposed uses of chlorothalonil are not expected to be >3.5 µg/mL. This value should be used in future assessments conducted by the Health Effects Division.

Table 6: Tier I Groundwater EDWCs for Total Toxic Chlorothalonil Residues From the Proposed New Uses on Bulb Vegetables, Bushberries, and Low Growing Berries.

Crop	Peak (ug/L)
Bulb Vegetables (3-07A and 3-07B)	0.71
Bushberries (13-07B)	0.43
Low-Growing Berry (13-07G)	0.21
Turf: Golf Course Greens	3.5

* Bold font indicates highest value

Monitoring Data

Chlorothalonil is currently one of the most widely used fungicides in the United States, and according to available NAWQA (USGS National Water Quality Assessment Data Warehouse) aquatic monitoring data,⁴ chlorothalonil has been detected in both surface water and ground water sites throughout the United States. Several states have listed chlorothalonil as a pesticide of concern in the POINTS database.⁵

The most current monitoring data was evaluated in December 2009 (DP 371947). This monitoring data, summarized below, underscores the possibility that surface water, ground water, and air may be contaminated by chlorothalonil use. However, there are several reasons why this monitoring data should only be used to support model estimations but not supersede them in future assessments conducted by the Health Effects Division including: 1) the monitoring data do not specifically target chlorothalonil, therefore, the distribution of observed chlorothalonil concentrations may not accurately represent the potential exposure risks related to chlorothalonil use especially those areas where chlorothalonil use is high; 2) the number of samples taken at an individual site during a one year period is limited, thus, peak chlorothalonil exposure concentrations may not be captured in the available data; 3) the reported data are several years old and may not accurately reflect current use patterns; and 5) available monitoring data do not include SDS-3701, therefore, do not capture the potential exposure risk to total toxic chlorothalonil residues.

Surface Water Monitoring Data

A review of monitoring data was conducted to assess the observed chlorothalonil concentrations in surface water in the United States. Chlorothalonil was not detected in raw and finished drinking water in the USDA Pesticide Data Program or the USGS-EPA Pilot Reservoir Monitoring Program. In the USGS NAWQA monitoring program, chlorothalonil was detected in raw surface water. The detection frequency was 0.35% (25 detections/6954 samples). The maximum chlorothalonil concentration is 0.68 µg/L at a site in Sumter, GA (Station ID 02350080). The watershed for the site was characterized as cropped agricultural. The minimum reporting limit for chlorothalonil ranged from 0.007 to 1.8393 µg/L.

Surface water samples (324) were collected from 32 USGS⁶ water monitoring stations in 10 CA counties from March 18, 1993 to Nov. 2, 2002. The counties (# of samples) include Alpine (4), El-Dorado (4), Merced (87), Nevada (4), Orange (10), Sacramento (57), San Bernardino (8), San Joaquin (50), Stanislaus (74), Sutter (2), and Yolo (24). Minimum reporting limit ranged from 0.0350 to 0.5780 µg/L. There was one detection of chlorothalonil (0.290 µg/L) in a surface water sample from Merced County (USGS Station # 1123500) on Feb 08, 1994.

⁴ <https://infotrek.er.usgs.gov>

⁵ <http://www.points.wsu.edu/>

⁶ Data not located through the NAWQA data warehouse

Ground Water Monitoring Data

A review of monitoring data was conducted to assess the observed chlorothalonil concentrations in ground water in the United States. Chlorothalonil was detected in ground water in the USGS NAWQA monitoring program. The detection frequency was 0.018% (1 detections/5511 samples). The maximum chlorothalonil concentration is 0.41 µg/L at a site in Hennepin, MN (Station ID 450305093172501). The minimum reporting limit (MRL) for chlorothalonil ranged from 0.007 to 0.48 µg/L.

Ground water samples (381) were collected from 297 USGS⁶ water monitoring wells in 19 CA counties from August 11, 1993 to Sept 21, 2004. The counties (# of samples) include Butte (9), Colusa (4), Fresno (82), Glenn (12), Kern (4), Kings (8), Los Angeles (2), Madera (14), Merced (31), Orange (26), Placer (3), Riverside (16), Sacramento (30), San Bernardino (10), San Joaquin (30), Stanislaus (56), Sutter (17), Tulare (23), Yolo (1), and Yuba (3). Minimum reporting limit ranged from 0.0350 to 0.480 µg/L. There were no chlorothalonil detections in ground water samples.

Atmospheric Monitoring Data in California

While evolution of volatile compounds was not significant in laboratory testing, ambient air monitoring from 7/5/89 to 8/3/89 for four sites in Fresno County, California⁷ was targeted for chlorothalonil applications to tomatoes for control of black mold. All samples (n=92) were less than the minimum detection limit of 7.0 ng/m³.

Ambient air monitoring conducted from 1/8/90 to 2/2/90 at three sites in Ventura County, California⁷ was targeted to coincide with applications to celery. Distances from application sites were unknown. The maximum air concentration was 0.005 µg/m³ at an air sampling site near the Animal Control Shelter in Camarillo, California. Five air samples were above the minimum detection limit of 4.0 ng/m³, while 96% of the samples were below the minimum detection limit.

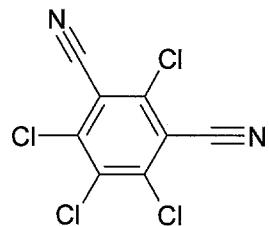
Ambient air monitoring was conducted during 2/92 for 72 hours immediately after chlorothalonil was aerially applied to celery in Ventura County, California.⁷ The distance between the sampling location and application site was not reported. Chlorothalonil was aerially applied at a rate of 1 lb/acre. The maximum air concentration was 158 ng/m³, and a total of 75% of the samples had detections of chlorothalonil above 4 ng/m³.

⁷ Kollman, W. S.. 2002. Summary of Assembly Bill 1807/3219: Pesticide Air Monitoring Results: Conducted by California Air Resources Board 1986-2000. California Department of Pesticide Regulation

APPENDIX A

Chlorothalonil

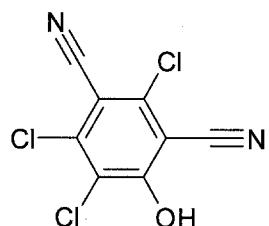
2,4,5,6-Tetrachloro-1,3-benzenedicarbonitrile; 1897-45-6



4-Hydroxy-2,5,6-trichloro-1,3-dicyanobenzene

4-Hydroxy-2,5,6-tricloroisophthalonitrile

SDS-3701



APPENDIX B

PRZM/EXAMS OUTPUT

Chlorothalonil on Bulb Vegetables

CA Onion

stored as ChlorothalonilCAonion_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: CAonion_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:36

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w23155.dvf modified Wedday, 3 July 2002 at 10:04:20

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	22.48	16.98	12.66	9.216	6.19	1.535
1962	55.66	44.09	31.15	17.51	11.78	2.923
1963	77.5	50.97	21.31	12.75	8.757	2.176
1964	21.44	15.95	12.34	9.423	6.35	1.572
1965	21.1	15.61	12.29	10.14	6.987	1.734
1966	38.45	28.15	18.32	11.83	7.944	1.969
1967	22.79	17.13	13.57	10.14	6.841	1.702
1968	20.89	15.04	11	8.6	5.857	1.448
1969	24.32	19.75	13.89	10.43	7.048	1.747
1970	25.94	17.81	12.85	8.843	5.944	1.473
1971	21.03	15.52	12.29	9.441	6.375	1.581
1972	23.05	17.56	12.97	9.117	6.115	1.511
1973	23.5	17.37	13.64	9.159	6.565	1.627
1974	24.71	15.89	11.07	9.919	6.776	1.68
1975	24.05	16.59	12.98	9.273	6.228	1.544
1976	27.38	18.67	12.51	8.943	6.003	1.484
1977	21.36	15.63	11.51	8.404	5.851	1.45
1978	177	137	53.5	23.3	15.73	3.899
1979	22.32	15.86	11.79	8.927	5.997	1.486
1980	21.67	14.72	11.37	8.877	5.988	1.482
1981	22.91	16.16	11.55	8.548	5.868	1.455
1982	21.55	15.89	12.15	9.067	6.265	1.553
1983	35.7	28.19	18.72	11.7	7.893	1.958
1984	20.98	15.45	12.12	9.31	6.258	1.548
1985	22.49	17.07	12.92	9.587	6.451	1.6
1986	19.56	13.68	10.58	8.747	5.923	1.469
1987	21.88	16.42	12.58	9.43	6.33	1.569
1988	20.98	15.32	11.56	8.689	5.867	1.45
1989	26.74	19.3	14.64	10.34	6.958	1.724
1990	21.44	15.9	12.74	9.696	6.521	1.616

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		177	137	53.5	23.3	15.73
0.0645161290322581		77.5	50.97	31.15	17.51	11.78
0.0967741935483871		55.66	44.09	21.31	12.75	8.757

0.129032258064516	38.45	28.19	18.72	11.83	7.944	1.969
0.161290322580645	35.7	28.15	18.32	11.7	7.893	1.958
0.193548387096774	27.38	19.75	14.64	10.43	7.048	1.747
0.225806451612903	26.74	19.3	13.89	10.34	6.987	1.734
0.258064516129032	25.94	18.67	13.64	10.14	6.958	1.724
0.290322580645161	24.71	17.81	13.57	10.14	6.841	1.702
0.32258064516129	24.32	17.56	12.98	9.919	6.776	1.68
0.354838709677419	24.05	17.37	12.97	9.696	6.565	1.627
0.387096774193548	23.5	17.13	12.92	9.587	6.521	1.616
0.419354838709677	23.05	17.07	12.85	9.441	6.451	1.6
0.451612903225806	22.91	16.98	12.74	9.43	6.375	1.581
0.483870967741936	22.79	16.59	12.66	9.423	6.35	1.572
0.516129032258065	22.49	16.42	12.58	9.31	6.33	1.569
0.548387096774194	22.48	16.16	12.51	9.273	6.265	1.553
0.580645161290323	22.32	15.95	12.34	9.216	6.258	1.548
0.612903225806452	21.88	15.9	12.29	9.159	6.228	1.544
0.645161290322581	21.67	15.89	12.29	9.117	6.19	1.535
0.67741935483871	21.55	15.89	12.15	9.067	6.115	1.511
0.709677419354839	21.44	15.86	12.12	8.943	6.003	1.486
0.741935483870968	21.44	15.63	11.79	8.927	5.997	1.484
0.774193548387097	21.36	15.61	11.56	8.877	5.988	1.482
0.806451612903226	21.1	15.52	11.55	8.843	5.944	1.473
0.838709677419355	21.03	15.45	11.51	8.747	5.923	1.469
0.870967741935484	20.98	15.32	11.37	8.689	5.868	1.455
0.903225806451613	20.98	15.04	11.07	8.6	5.867	1.45
0.935483870967742	20.89	14.72	11	8.548	5.857	1.45
0.967741935483871	19.56	13.68	10.58	8.404	5.851	1.448

0.1 53.939 42.5 21.051 12.658 8.6757 2.1553
 Average of yearly averages: 1.732166666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilCAonion_DWA_1

Metfile: w23155.dvf

PRZM scenario: CAonion_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method:	CAM	2	integer	See PRZM manual

Incorporation Depth: DEPI 0 cm
 Application Rate: TAPP 2.5 kg/ha
 Application Efficiency: APPEFF 0.95 fraction
 Spray Drift DRFT .16 fraction of application rate applied to pond
 Application Date Date 16-1 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 2.5 kg/ha
 Interval 2 interval 7 days Set to 0 or delete line for single app.
 app. rate 2 apprate 2.5 kg/ha
 Interval 3 interval 7 days Set to 0 or delete line for single app.
 app. rate 3 apprate 2.5 kg/ha
 Interval 4 interval 7 days Set to 0 or delete line for single app.
 app. rate 4 apprate 2.5 kg/ha
 Interval 5 interval 7 days Set to 0 or delete line for single app.
 app. rate 5 apprate 2.5 kg/ha
 Interval 6 interval 7 days Set to 0 or delete line for single app.
 app. rate 6 apprate 1.7 kg/ha
 Record 17: FILTRA
 IPSCND1
 UPTKF
 Record 18: PLVKRT
 PLDKRT
 FEXTRC 0.5
 Flag for Index Res. Run IR Reservoir
 Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

GA Onion

stored as ChlorothalonilGAonion_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: GAOnion_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w03822.dvf modified Wedday, 3 July 2002 at 10:04:32

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	66.22	45.66	27.74	16.93	13.43	3.516
1962	202	142	51.65	28.71	20.23	5.044
1963	131	99.67	42.46	25.91	18.13	4.535
1964	272	207	107	47.28	31.95	7.968
1965	98.76	66.76	41.6	22.97	16.33	4.064
1966	161	109	47.84	28.08	19.43	4.837
1967	33.76	25.2	17.81	11.22	7.537	1.888
1968	23.38	17.97	14.84	11.1	7.486	1.871
1969	52.59	37.07	25.02	20.77	16.36	4.105
1970	55.74	37.07	19.21	17.07	13.82	3.434
1971	49.05	35.38	20.86	12.43	9.355	2.382
1972	56.72	44.9	28.96	17.34	12.75	3.183
1973	115	83.88	42.89	26.67	18.91	4.739
1974	45.57	31.64	24.48	12.53	8.556	2.204
1975	36.73	26.46	14.45	12.58	9.855	2.582
1976	31.44	23.63	15.88	11.04	8.119	2.138
1977	27.24	22.29	16.62	12.78	8.609	2.15
1978	45.31	35.64	29.22	22.11	15.25	3.86
1979	92.29	70.34	32.74	20.04	14.09	3.574
1980	86.74	66.38	25.49	18.2	14.1	3.506
1981	49.86	41.09	21.59	13.5	9.827	2.444
1982	78.35	61.68	26.4	14.42	9.895	2.633
1983	170	127	53.61	37.45	27.05	6.763
1984	177	135	70.77	44.79	31.09	7.734
1985	28.84	20.31	13.87	10.19	7.164	1.786
1986	184	122	59.83	27.42	18.95	4.704
1987	62.68	45.27	29.59	20.08	14.26	3.551
1988	168	126	55.15	27.07	18.36	4.616
1989	18.92	12.83	9.901	7.642	5.76	1.461
1990	34.78	25.5	17.41	10.95	8.773	2.197

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	272	207	107	47.28	31.95	7.968
0.0645161290322581	202	142	70.77	44.79	31.09	7.734
0.0967741935483871	184	135	59.83	37.45	27.05	6.763
0.129032258064516	177	127	55.15	28.71	20.23	5.044
0.161290322580645	170	126	53.61	28.08	19.43	4.837
0.193548387096774	168	122	51.65	27.42	18.95	4.739
0.225806451612903	161	109	47.84	27.07	18.91	4.704
0.258064516129032	131	99.67	42.89	26.67	18.36	4.616
0.290322580645161	115	83.88	42.46	25.91	18.13	4.535

0.32258064516129	98.76	70.34	41.6	22.97	16.36	4.105
0.354838709677419	92.29	66.76	32.74	22.11	16.33	4.064
0.387096774193548	86.74	66.38	29.59	20.77	15.25	3.86
0.419354838709677	78.35	61.68	29.22	20.08	14.26	3.574
0.451612903225806	66.22	45.66	28.96	20.04	14.1	3.551
0.483870967741936	62.68	45.27	27.74	18.2	14.09	3.516
0.516129032258065	56.72	44.9	26.4	17.34	13.82	3.506
0.548387096774194	55.74	41.09	25.49	17.07	13.43	3.434
0.580645161290323	52.59	37.07	25.02	16.93	12.75	3.183
0.612903225806452	49.86	37.07	24.48	14.42	9.895	2.633
0.645161290322581	49.05	35.64	21.59	13.5	9.855	2.582
0.67741935483871	45.57	35.38	20.86	12.78	9.827	2.444
0.709677419354839	45.31	31.64	19.21	12.58	9.355	2.382
0.741935483870968	36.73	26.46	17.81	12.53	8.773	2.204
0.774193548387097	34.78	25.5	17.41	12.43	8.609	2.197
0.806451612903226	33.76	25.2	16.62	11.22	8.556	2.15
0.838709677419355	31.44	23.63	15.88	11.1	8.119	2.138
0.870967741935484	28.84	22.29	14.84	11.04	7.537	1.888
0.903225806451613	27.24	20.31	14.45	10.95	7.486	1.871
0.935483870967742	23.38	17.97	13.87	10.19	7.164	1.786
0.967741935483871	18.92	12.83	9.901	7.642	5.76	1.461

0.1 183.3 134.2 59.362 36.576 26.368 6.5911

Average of yearly averages: 3.648966666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilGAonion_DWA_1

Metfile: w03822.dvf

PRZM scenario: GAOnion_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable	Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol		
Vapor Pressure	vapr	5.72e-7	torr		
Solubility	sol	0.8	mg/L		
Kd	Kd		mg/L		
Koc	Koc	554	mg/L		
Photolysis half-life	kdp	0.5	days	Half-life	
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife	
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife	
Aerobic Soil Metabolism	asm	33	days	Halfife	
Hydrolysis:	pH 7	0	days	Half-life	
Method: CAM	2	integer	See PRZM manual		
Incorporation Depth:	DEPI	0	cm		
Application Rate: TAPP	2.5	kg/ha			
Application Efficiency:	APPEFF	0.95	fraction		
Spray Drift	DRFT	.16	fraction of application rate applied to pond		
Application Date	Date	16-1	dd/mm or dd/mmm or dd-mm or dd-mmm		
Interval 1	interval	7	days	Set to 0 or delete line for single app.	

app. rate 1	apprate	2.5	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	2.5	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	2.5	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	2.5	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	2.5	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	1.7	kg/ha	

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

IDN Potato

stored as ChlorothalonilIDNpotato_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: IDNpotato_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w24156.dvf modified Wedday, 3 July 2002 at 10:04:38

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	19.05	12.98	9.851	7.186	4.892	1.222
1962	28.03	18.25	11.97	8.331	5.794	1.452
1963	27.44	17.5	12.91	10.04	6.828	1.709
1964	29.15	19.96	13.08	9.364	6.382	1.599
1965	27.91	16.6	13.44	9.633	6.651	1.672
1966	25.33	15.04	11.54	8.581	5.829	1.464
1967	27.44	17.65	11.68	9.095	6.288	1.577
1968	26	17.01	11.82	8.668	5.954	1.493
1969	24.16	16.12	11.9	9.713	6.635	1.665
1970	21.97	14.78	10.63	8.455	5.823	1.464
1971	21.56	13.34	11.05	8.376	5.783	1.455
1972	27.1	16.96	13.03	8.846	6.029	1.51
1973	23.24	16.59	11.72	8.661	5.948	1.493
1974	22.72	13.75	9.857	7.324	5.066	1.273
1975	21.1	14.58	10.68	7.702	5.277	1.324
1976	24.37	15.9	11.61	8.46	5.793	1.45
1977	24.09	14.65	11.37	7.706	5.286	1.326
1978	24.68	14.9	11.18	8.349	5.753	1.443
1979	23.21	16.1	12.89	9.054	6.269	1.574
1980	22.04	15.37	10.76	8.627	5.949	1.491
1981	26.66	17.11	11.99	8.61	5.889	1.478
1982	22.89	14.81	10.91	8.554	5.923	1.489
1983	21.75	15.88	12.46	9.385	6.453	1.62
1984	22.96	15.23	12.47	9.573	6.507	1.631
1985	20.93	14.21	10.24	7.636	5.286	1.331
1986	23.05	15.31	11.22	7.963	5.548	1.393
1987	26.05	17.55	10.98	8.209	5.804	1.456
1988	20.23	13.77	9.878	7.183	4.9	1.227
1989	21.4	14.13	10.06	7.662	5.288	1.327
1990	23.86	16.17	11.47	8.695	5.959	1.493

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	29.15	19.96	13.44	10.04	6.828	1.709
0.0645161290322581	28.03	18.25	13.08	9.713	6.651	1.672
0.0967741935483871	27.91	17.65	13.03	9.633	6.635	1.665
0.129032258064516	27.44	17.55	12.91	9.573	6.507	1.631
0.161290322580645	27.44	17.5	12.89	9.385	6.453	1.62
0.193548387096774	27.1	17.11	12.47	9.364	6.382	1.599
0.225806451612903	26.66	17.01	12.46	9.095	6.288	1.577
0.258064516129032	26.05	16.96	11.99	9.054	6.269	1.574
0.290322580645161	26	16.6	11.97	8.846	6.029	1.51

0.32258064516129	25.33	16.59	11.9	8.695	5.959	1.493
0.354838709677419	24.68	16.17	11.82	8.668	5.954	1.493
0.387096774193548	24.37	16.12	11.72	8.661	5.949	1.493
0.419354838709677	24.16	16.1	11.68	8.627	5.948	1.491
0.451612903225806	24.09	15.9	11.61	8.61	5.923	1.489
0.483870967741936	23.86	15.88	11.54	8.581	5.889	1.478
0.516129032258065	23.24	15.37	11.47	8.554	5.829	1.464
0.548387096774194	23.21	15.31	11.37	8.46	5.823	1.464
0.580645161290323	23.05	15.23	11.22	8.455	5.804	1.456
0.612903225806452	22.96	15.04	11.18	8.376	5.794	1.455
0.645161290322581	22.89	14.9	11.05	8.349	5.793	1.452
0.67741935483871	22.72	14.81	10.98	8.331	5.783	1.45
0.709677419354839	22.04	14.78	10.91	8.209	5.753	1.443
0.741935483870968	21.97	14.65	10.76	7.963	5.548	1.393
0.774193548387097	21.75	14.58	10.68	7.706	5.288	1.331
0.806451612903226	21.56	14.21	10.63	7.702	5.286	1.327
0.838709677419355	21.4	14.13	10.24	7.662	5.286	1.326
0.870967741935484	21.1	13.77	10.06	7.636	5.277	1.324
0.903225806451613	20.93	13.75	9.878	7.324	5.066	1.273
0.935483870967742	20.23	13.34	9.857	7.186	4.9	1.227
0.967741935483871	19.05	12.98	9.851	7.183	4.892	1.222

0.1 27.863 17.64 13.018 9.627 6.6222 1.6616

Average of yearly averages: 1.47003333333333

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilIDNpotato_DWA_1

Metfile: w24156.dvf

PRZM scenario: IDNpotato_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	2.5	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	1-6	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1	apprate	2.5	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	2.5	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	2.5	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	2.5	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	2.5	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	1.7	kg/ha	
Record 17:	FILTRA			

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

ME Potato

stored as ChlorothalonilMEpotato_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: MEpotatoSTD.txt modified Tuesday, 26 August 2008 at 06:16:40

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14607.dvf modified Wedday, 3 July 2002 at 10:05:36

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	23.27	13.91	9.574	7.958	6.03	1.875
1962	113	72.24	34.66	17.24	12.29	3.766
1963	27.85	18.38	11.23	7.417	6.145	2.2
1964	66.08	38.69	14.85	9.198	6.431	2.123
1965	17.2	10.57	7.87	6.749	4.76	1.502
1966	21.81	13.62	9.131	6.898	4.674	1.531
1967	88.35	49.22	16.23	9.719	6.961	2.372
1968	46.3	30.22	12.45	9.543	7.08	2.287
1969	28.3	19.14	10.5	8.343	6.93	2.483
1970	23.41	17.53	8.734	7.405	5.134	2.128
1971	20.54	15.81	9.856	6.988	4.815	1.42
1972	32.51	23.81	14.33	10.81	8.41	2.694
1973	56.53	44.6	19.39	10.44	7.324	2.293
1974	22.99	14.07	9.655	6.67	5.044	1.509
1975	21.78	13.46	9.332	7.765	5.455	1.557
1976	53.31	35.62	21.37	14.02	11.43	3.583
1977	54.62	32.8	17.06	10.82	9.865	3.068
1978	88.43	51.74	22.64	12.64	8.8	2.706
1979	22.19	15.22	8.548	6.544	4.944	1.847
1980	28.63	17.14	11.85	9.549	6.588	1.956
1981	135	80.19	26.82	13.42	12.11	3.491
1982	78.42	45.22	15.41	11.01	8.556	2.785
1983	95.83	56.87	21.63	12.17	9.322	2.996
1984	42.79	31.61	20.96	13.41	9.258	2.775
1985	26.6	17.04	11.44	8.494	5.857	1.782
1986	24.75	15.4	9.657	7.625	7.124	2.07
1987	32.41	22.2	11.56	8.315	5.746	1.764
1988	24.24	16.59	9.973	6.901	5.52	1.607
1989	52.81	32.6	10.91	7.8	7.476	2.104
1990	61	41	19.18	12.79	9.258	3.153

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		135	80.19	34.66	17.24	12.29
0.0645161290322581		113	72.24	26.82	14.02	12.11
0.0967741935483871		95.83	56.87	22.64	13.42	11.43
0.129032258064516		88.43	51.74	21.63	13.41	9.865
0.161290322580645		88.35	49.22	21.37	12.79	9.322
0.193548387096774		78.42	45.22	20.96	12.64	9.258
0.225806451612903		66.08	44.6	19.39	12.17	9.258
0.258064516129032		61	41	19.18	11.01	8.8
0.290322580645161		56.53	38.69	17.06	10.82	8.556
						2.706

0.32258064516129	54.62	35.62	16.23	10.81	8.41	2.694
0.354838709677419	53.31	32.8	15.41	10.44	7.476	2.483
0.387096774193548	52.81	32.6	14.85	9.719	7.324	2.372
0.419354838709677	46.3	31.61	14.33	9.549	7.124	2.293
0.451612903225806	42.79	30.22	12.45	9.543	7.08	2.287
0.483870967741936	32.51	23.81	11.85	9.198	6.961	2.2
0.516129032258065	32.41	22.2	11.56	8.494	6.93	2.128
0.548387096774194	28.63	19.14	11.44	8.343	6.588	2.123
0.580645161290323	28.3	18.38	11.23	8.315	6.431	2.104
0.612903225806452	27.85	17.53	10.91	7.958	6.145	2.07
0.645161290322581	26.6	17.14	10.5	7.8	6.03	1.956
0.67741935483871	24.75	17.04	9.973	7.765	5.857	1.875
0.709677419354839	24.24	16.59	9.856	7.625	5.746	1.847
0.741935483870968	23.41	15.81	9.657	7.417	5.52	1.782
0.774193548387097	23.27	15.4	9.655	7.405	5.455	1.764
0.806451612903226	22.99	15.22	9.574	6.988	5.134	1.607
0.838709677419355	22.19	14.07	9.332	6.901	5.044	1.557
0.870967741935484	21.81	13.91	9.131	6.898	4.944	1.531
0.903225806451613	21.78	13.62	8.734	6.749	4.815	1.509
0.935483870967742	20.54	13.46	8.548	6.67	4.76	1.502
0.967741935483871	17.2	10.57	7.87	6.544	4.674	1.42

0.1 95.09 56.357 22.539 13.419 11.2735 3.4572

Average of yearly averages: 2.31423333333333

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilMEpotato_DWA_1

Metfile: w14607.dvf

PRZM scenario: MEpotatoSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	2.5	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	1-6	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1	apprate	2.5	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	2.5	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	2.5	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	2.5	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	2.5	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	1.7	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

NC Sweet Potato

stored as ChlorothalonilNCSweetpotato_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: NCSweetPotatoSTD.txt modified Tuesday, 26 August 2008 at 06:16:40

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w13722.dvf modified Wedday, 3 July 2002 at 10:05:50

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	41.22	21	11.56	7.151	5.016	1.308
1962	118	59.5	23.98	14.65	10.26	2.642
1963	36.34	24.4	14.04	8.214	5.653	1.526
1964	68.54	32.79	11.21	7.244	5.635	1.589
1965	261	140	55.57	26.82	18.41	4.736
1966	109	60.95	19.41	11.17	8.39	2.291
1967	268	145	45.43	20.54	14.12	3.701
1968	53.02	25.28	12.83	10.41	7.415	1.971
1969	57.37	31.73	15.07	9.722	7.667	1.997
1970	115	55.15	15.39	8.523	6.97	1.826
1971	66.17	32.9	15.11	11.59	8.05	2.106
1972	181	96.52	31.57	17.5	12.72	3.276
1973	227	115	48.68	22.37	15.42	3.94
1974	49.37	28.44	13.03	8.31	6.351	1.669
1975	83.86	56.16	14.91	11.15	8.154	2.075
1976	42.38	24.92	14.92	7.857	5.291	1.615
1977	39.87	23.71	11.61	6.437	4.856	1.559
1978	81.09	38.83	15.9	10.31	7.554	1.95
1979	53.26	25.77	13.51	8.978	7.264	1.978
1980	260	128	31.87	15.05	10.2	2.706
1981	66.89	45.61	16.32	10.62	7.531	2.011
1982	121	65.23	25.43	12.99	8.896	2.283
1983	41.21	28.32	14.8	8.391	5.639	1.506
1984	216	124	34.2	18.48	13.15	3.348
1985	44.69	25.67	11.92	8.595	6.565	1.733
1986	27.15	19	9.805	6.74	5.192	1.457
1987	51.9	26.34	9.41	6.059	4.082	1.273
1988	24.35	14.14	8.414	6.236	4.51	1.285
1989	127	61.08	21.11	10.81	7.625	2.006
1990	46.72	32.11	12.6	6.782	4.653	1.26

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	268	145	55.57	26.82	18.41	4.736
0.0645161290322581	261	140	48.68	22.37	15.42	3.94
0.0967741935483871	260	128	45.43	20.54	14.12	3.701
0.129032258064516	227	124	34.2	18.48	13.15	3.348
0.161290322580645	216	115	31.87	17.5	12.72	3.276
0.193548387096774	181	96.52	31.57	15.05	10.26	2.706
0.225806451612903	127	65.23	25.43	14.65	10.2	2.642
0.258064516129032	121	61.08	23.98	12.99	8.896	2.291
0.290322580645161	118	60.95	21.11	11.59	8.39	2.283

0.32258064516129	115	59.5	19.41	11.17	8.154	2.106
0.354838709677419	109	56.16	16.32	11.15	8.05	2.075
0.387096774193548	83.86	55.15	15.9	10.81	7.667	2.011
0.419354838709677	81.09	45.61	15.39	10.62	7.625	2.006
0.451612903225806	68.54	38.83	15.11	10.41	7.554	1.997
0.483870967741936	66.89	32.9	15.07	10.31	7.531	1.978
0.516129032258065	66.17	32.79	14.92	9.722	7.415	1.971
0.548387096774194	57.37	32.11	14.91	8.978	7.264	1.95
0.580645161290323	53.26	31.73	14.8	8.595	6.97	1.826
0.612903225806452	53.02	28.44	14.04	8.523	6.565	1.733
0.645161290322581	51.9	28.32	13.51	8.391	6.351	1.669
0.67741935483871	49.37	26.34	13.03	8.31	5.653	1.615
0.709677419354839	46.72	25.77	12.83	8.214	5.639	1.589
0.741935483870968	44.69	25.67	12.6	7.857	5.635	1.559
0.774193548387097	42.38	25.28	11.92	7.244	5.291	1.526
0.806451612903226	41.22	24.92	11.61	7.151	5.192	1.506
0.838709677419355	41.21	24.4	11.56	6.782	5.016	1.457
0.870967741935484	39.87	23.71	11.21	6.74	4.856	1.308
0.903225806451613	36.34	21	9.805	6.437	4.653	1.285
0.935483870967742	27.15	19	9.41	6.236	4.51	1.273
0.967741935483871	24.35	14.14	8.414	6.059	4.082	1.26

0.1 256.7 127.6 44.307 20.334 14.023 3.6657

Average of yearly averages: 2.1541

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilNCsweetpotato_DWA_1

Metfile: w13722.dvf

PRZM scenario: NCSweetPotatoSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	2.5	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1	apprate	2.5	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	2.5	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	2.5	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	2.5	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	2.5	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	1.7	kg/ha	
Record 17:	FILTRA			

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

Chlorothalonil on Bushberry

CA Fruit

stored as ChlorothalonilCAFruitBB_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: CAFruit_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:36

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w93193.dvf modified Wednesday, 3 July 2002 at 10:04:24

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	21.5	15.4	8.302	6.386	4.473	1.103
1962	21.45	14.8	7.952	4.117	2.757	0.7219
1963	22.49	18.45	9.743	5.564	3.744	1.019
1964	26.35	18.38	12.52	5.961	4.045	1.009
1965	21.22	14.6	7.692	4.841	3.295	0.8349
1966	21.28	15.36	7.575	5.778	4.301	1.085
1967	21.17	14.18	7.423	3.991	2.681	0.691
1968	47.48	35.06	15.69	7.437	5.369	1.329
1969	22.09	15.69	8.876	4.641	3.128	0.8932
1970	21.52	14.75	7.991	5.835	4.44	1.238
1971	22.04	15.92	8.96	4.696	3.453	0.8844
1972	43.18	34.12	19.14	9.828	6.64	1.695
1973	21.61	15.17	8.264	4.385	3.082	0.7873
1974	23.12	16.33	9.909	5.087	3.455	0.9315
1975	22.47	16.45	9.294	4.823	3.234	0.8135
1976	21.39	15.05	8.201	4.499	3.015	0.8303
1977	21.05	14.52	7.476	3.831	3.581	0.9322
1978	20.87	14.83	7.49	4.577	3.086	0.8346
1979	21.02	14.64	7.511	3.936	2.636	0.6871
1980	20.95	14.52	7.39	3.779	2.53	0.7023
1981	21.67	14.82	8.142	4.232	2.832	0.7565
1982	25.63	18.34	11.09	7.58	5.407	1.486
1983	20.88	14.31	7.331	4.78	3.226	0.8538
1984	21.57	14.96	8.127	5.139	3.644	0.9077
1985	21.32	15.04	8.898	5.207	3.536	0.8933
1986	42.95	32.09	11.22	5.598	5.067	1.265
1987	20.82	14.77	7.412	3.782	2.537	0.8489
1988	20.89	14.4	7.273	3.712	2.951	0.7418
1989	21.27	14.73	7.772	4.009	2.686	0.7026
1990	21	14.74	7.55	3.871	2.596	0.8927

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		47.48	35.06	19.14	9.828	6.64
0.0645161290322581		43.18	34.12	15.69	7.58	5.407
0.0967741935483871		42.95	32.09	12.52	7.437	5.369
0.129032258064516		26.35	18.45	11.22	6.386	5.067
0.161290322580645		25.63	18.38	11.09	5.961	4.473
0.193548387096774		23.12	18.34	9.909	5.835	4.44
0.225806451612903		22.49	16.45	9.743	5.778	4.301
						1.085

0.258064516129032	22.47	16.33	9.294	5.598	4.045	1.019
0.290322580645161	22.09	15.92	8.96	5.564	3.744	1.009
0.32258064516129	22.04	15.69	8.898	5.207	3.644	0.9322
0.354838709677419	21.67	15.4	8.876	5.139	3.581	0.9315
0.387096774193548	21.61	15.36	8.302	5.087	3.536	0.9077
0.419354838709677	21.57	15.17	8.264	4.841	3.455	0.8933
0.451612903225806	21.52	15.05	8.201	4.823	3.453	0.8932
0.483870967741936	21.5	15.04	8.142	4.78	3.295	0.8927
0.516129032258065	21.45	14.96	8.127	4.696	3.234	0.8844
0.548387096774194	21.39	14.83	7.991	4.641	3.226	0.8538
0.580645161290323	21.32	14.82	7.952	4.577	3.128	0.8489
0.612903225806452	21.28	14.8	7.772	4.499	3.086	0.8349
0.645161290322581	21.27	14.77	7.692	4.385	3.082	0.8346
0.67741935483871	21.22	14.75	7.575	4.232	3.015	0.8303
0.709677419354839	21.17	14.74	7.55	4.117	2.951	0.8135
0.741935483870968	21.05	14.73	7.511	4.009	2.832	0.7873
0.774193548387097	21.02	14.64	7.49	3.991	2.757	0.7565
0.806451612903226	21	14.6	7.476	3.936	2.686	0.7418
0.838709677419355	20.95	14.52	7.423	3.871	2.681	0.7219
0.870967741935484	20.89	14.52	7.412	3.831	2.636	0.7026
0.903225806451613	20.88	14.4	7.39	3.782	2.596	0.7023
0.935483870967742	20.87	14.31	7.331	3.779	2.537	0.691
0.967741935483871	20.82	14.18	7.273	3.712	2.53	0.6871

0.1 41.29 30.726 12.39 7.3319 5.3388 1.3226

Average of yearly averages: 0.945683333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilCAFruitBB_DWA_1

Metfile: w93193.dvf

PRZM scenario: CAfruit_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure vapr	5.72e-7	torr		
Solubility sol	0.8	mg/L		
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	3.4	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	

Application Date Date 15-10 dd/mm or dd/mmm or dd-mm or dd-mmm
Interval 1 interval 10 days Set to 0 or delete line for single app.
app. rate 1 apprate 3.4 kg/ha
Interval 2 interval 10 days Set to 0 or delete line for single app.
app. rate 2 apprate 3.4 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

Chlorothalonil on Low Growing Berry

CA Fruit

stored as ChlorothalonilCAFruitLGB_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: CAfruit_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:36

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w93193.dvf modified Wedday, 3 July 2002 at 10:04:24

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	13.06	9.029	6.328	2.387	1.596	0.3996
1962	13.38	9.407	6.566	2.446	1.635	0.4052
1963	20.57	14.71	8.373	3.843	2.569	0.6386
1964	13.39	9.45	6.645	2.541	1.698	0.425
1965	12.72	8.612	6.041	2.342	1.565	0.3881
1966	12.5	8.286	5.767	2.129	1.422	0.3733
1967	16.61	12.25	7.586	3.984	2.663	0.6601
1968	12.65	8.715	6.07	2.301	1.538	0.3935
1969	24.85	15.92	8.645	3.989	2.666	0.661
1970	12.73	8.64	6.087	2.345	1.567	0.4127
1971	16.04	10.39	6.278	3.512	2.359	0.586
1972	11.88	7.494	5.219	1.962	1.317	0.3392
1973	13.75	9.837	6.96	2.635	1.76	0.437
1974	12.74	8.582	6.004	2.283	1.525	0.3814
1975	13.5	9.62	6.81	2.692	1.799	0.4463
1976	13.29	9.338	6.585	2.547	1.702	0.4365
1977	13.23	9.209	6.418	2.373	1.587	0.3957
1978	15.46	10.89	6.536	3.042	2.033	0.5038
1979	12.43	8.219	5.744	2.15	1.436	0.3558
1980	12.95	8.887	6.227	2.343	1.566	0.3883
1981	12.96	8.849	6.273	2.4	1.603	0.3983
1982	20.25	14.1	8.512	3.465	2.315	0.5763
1983	13.69	9.69	6.692	2.96	1.98	0.4903
1984	12.13	7.837	5.474	2.06	1.376	0.346
1985	13.07	8.999	6.257	2.3	1.536	0.3844
1986	15.42	9.752	6.262	2.316	1.547	0.3973
1987	12.82	8.672	6.087	2.236	1.566	0.3923
1988	12.37	8.154	5.704	3.239	2.166	0.535
1989	20.49	13.42	8.26	3.1	2.08	0.5166
1990	12.39	8.15	5.669	2.289	1.772	0.4404

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	24.85	15.92	8.645	3.989	2.666	0.661
0.0645161290322581	20.57	14.71	8.512	3.984	2.663	0.6601
0.0967741935483871	20.49	14.1	8.373	3.843	2.569	0.6386
0.129032258064516	20.25	13.42	8.26	3.512	2.359	0.586
0.161290322580645	16.61	12.25	7.586	3.465	2.315	0.5763
0.193548387096774	16.04	10.89	6.96	3.239	2.166	0.535
0.225806451612903	15.46	10.39	6.81	3.1	2.08	0.5166

0.258064516129032	15.42	9.837	6.692	3.042	2.033	0.5038
0.290322580645161	13.75	9.752	6.645	2.96	1.98	0.4903
0.32258064516129	13.69	9.69	6.585	2.692	1.799	0.4463
0.354838709677419	13.5	9.62	6.566	2.635	1.772	0.4404
0.387096774193548	13.39	9.45	6.536	2.547	1.76	0.437
0.419354838709677	13.38	9.407	6.418	2.541	1.702	0.4365
0.451612903225806	13.29	9.338	6.328	2.446	1.698	0.425
0.483870967741936	13.23	9.209	6.278	2.4	1.635	0.4127
0.516129032258065	13.07	9.029	6.273	2.387	1.603	0.4052
0.548387096774194	13.06	8.999	6.262	2.373	1.596	0.3996
0.580645161290323	12.96	8.887	6.257	2.345	1.587	0.3983
0.612903225806452	12.95	8.849	6.227	2.343	1.567	0.3973
0.645161290322581	12.82	8.715	6.087	2.342	1.566	0.3957
0.67741935483871	12.74	8.672	6.087	2.316	1.566	0.3935
0.709677419354839	12.73	8.64	6.07	2.301	1.565	0.3923
0.741935483870968	12.72	8.612	6.041	2.3	1.547	0.3883
0.774193548387097	12.65	8.582	6.004	2.289	1.538	0.3881
0.806451612903226	12.5	8.286	5.767	2.283	1.536	0.3844
0.838709677419355	12.43	8.219	5.744	2.236	1.525	0.3814
0.870967741935484	12.39	8.154	5.704	2.15	1.436	0.3733
0.903225806451613	12.37	8.15	5.669	2.129	1.422	0.3558
0.935483870967742	12.13	7.837	5.474	2.06	1.376	0.346
0.967741935483871	11.88	7.494	5.219	1.962	1.317	0.3392

0.1 20.466 14.032 8.3617 3.8099 2.548 0.63334

Average of yearly averages: 0.450133333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilCAFruitLGB_DWA_1

Metfile: w93193.dvf

PRZM scenario: CAfruit_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP		1.7	kg/ha	
Application Efficiency:		APPEFF	0.95	fraction
Spray Drift	DRFT	.16		fraction of application rate applied to pond

Application Date Date 15-3 dd/mm or dd/mmm or dd-mm or dd-mmm
Interval 1 interval 7 days Set to 0 or delete line for single app.
app. rate 1 apprate 1.7 kg/ha
Interval 2 interval 7 days Set to 0 or delete line for single app.
app. rate 2 apprate 1.7 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

CA Grapes

stored as ChlorothalonilCAGrapes_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: CAGrapes_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:36

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w93193.dvf modified Wednesday, 3 July 2002 at 10:04:24

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	13.07	9.039	6.348	2.398	1.604	0.4035
1962	13.38	9.407	6.567	2.45	1.639	0.4069
1963	19.16	13.51	7.955	3.42	2.287	0.572
1964	13.39	9.452	6.646	2.552	1.708	0.4294
1965	12.72	8.754	6.09	2.34	1.564	0.3882
1966	12.5	8.287	5.767	2.133	1.426	0.3841
1967	13.68	11.04	7.137	3.758	2.512	0.6245
1968	12.65	9.324	6.395	2.486	1.662	0.4314
1969	17.74	11.37	7.507	3.507	2.344	0.5832
1970	12.73	8.642	6.088	2.353	1.572	0.4237
1971	12.96	8.921	6.279	3.087	2.075	0.5163
1972	11.88	7.507	5.228	1.972	1.327	0.348
1973	14.28	10.28	7.381	2.791	1.864	0.4646
1974	13.41	9.035	6.155	2.349	1.57	0.3956
1975	13.5	9.62	6.811	2.701	1.805	0.4494
1976	13.29	9.341	6.586	2.56	1.714	0.4504
1977	13.24	9.244	6.45	2.396	1.606	0.4019
1978	22.85	14.69	7.802	3.493	2.335	0.5795
1979	12.43	8.219	5.744	2.157	1.441	0.3578
1980	12.95	8.887	6.227	2.352	1.574	0.3916
1981	13.46	9.245	6.639	2.523	1.691	0.4229
1982	17.29	12.85	7.99	3.215	2.149	0.537
1983	13.19	8.944	6.345	3.107	2.081	0.5158
1984	12.14	7.841	5.48	2.074	1.389	0.3511
1985	13.08	9.059	6.277	2.313	1.548	0.3898
1986	13.83	8.743	5.962	2.213	1.479	0.3864
1987	12.68	8.507	5.92	2.18	1.601	0.4029
1988	12.38	8.161	5.712	3.022	2.023	0.5001
1989	13.15	8.556	5.959	2.224	1.493	0.3725
1990	12.39	8.152	5.67	2.345	1.728	0.4304

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	22.85	14.69	7.99	3.758	2.512	0.6245
0.0645161290322581	19.16	13.51	7.955	3.507	2.344	0.5832
0.0967741935483871	17.74	12.85	7.802	3.493	2.335	0.5795
0.129032258064516	17.29	11.37	7.507	3.42	2.287	0.572
0.161290322580645	14.28	11.04	7.381	3.215	2.149	0.537
0.193548387096774	13.83	10.28	7.137	3.107	2.081	0.5163
0.225806451612903	13.68	9.62	6.811	3.087	2.075	0.5158
0.258064516129032	13.5	9.452	6.646	3.022	2.023	0.5001
0.290322580645161	13.46	9.407	6.639	2.791	1.864	0.4646

0.32258064516129	13.41	9.341	6.586	2.701	1.805	0.4504
0.354838709677419	13.39	9.324	6.567	2.56	1.728	0.4494
0.387096774193548	13.38	9.245	6.45	2.552	1.714	0.4314
0.419354838709677	13.29	9.244	6.395	2.523	1.708	0.4304
0.451612903225806	13.24	9.059	6.348	2.486	1.691	0.4294
0.483870967741936	13.19	9.039	6.345	2.45	1.662	0.4237
0.516129032258065	13.15	9.035	6.279	2.398	1.639	0.4229
0.548387096774194	13.08	8.944	6.277	2.396	1.606	0.4069
0.580645161290323	13.07	8.921	6.227	2.353	1.604	0.4035
0.612903225806452	12.96	8.887	6.155	2.352	1.601	0.4029
0.645161290322581	12.95	8.754	6.09	2.349	1.574	0.4019
0.67741935483871	12.73	8.743	6.088	2.345	1.572	0.3956
0.709677419354839	12.72	8.642	5.962	2.34	1.57	0.3916
0.741935483870968	12.68	8.556	5.959	2.313	1.564	0.3898
0.774193548387097	12.65	8.507	5.92	2.224	1.548	0.3882
0.806451612903226	12.5	8.287	5.767	2.213	1.493	0.3864
0.838709677419355	12.43	8.219	5.744	2.18	1.479	0.3841
0.870967741935484	12.39	8.161	5.712	2.157	1.441	0.3725
0.903225806451613	12.38	8.152	5.67	2.133	1.426	0.3578
0.935483870967742	12.14	7.841	5.48	2.074	1.389	0.3511
0.967741935483871	11.88	7.507	5.228	1.972	1.327	0.348

0.1 17.695 12.702 7.7725 3.4857 2.3302 0.57875

Average of yearly averages: 0.4436966666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilCAGrapes_DWA_1

Metfile: w93193.dvf

PRZM scenario: CAGrapes_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	1.7	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-3	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1 apprate 1.7 kg/ha
Interval 2 interval 7 days Set to 0 or delete line for single app.
app. rate 2 apprate 1.7 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

FL Strawberry

stored as ChlorothalonilFLstrawberry_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: FLstrawberry_WirrigSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12842.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	18.69	11.22	3.548	2.087	1.975	0.487
1962	13.03	6.384	4.135	2.184	1.46	0.3827
1963	142	84.05	24.15	9.832	6.656	1.665
1964	39.62	24.12	6.867	3.651	2.684	0.6921
1965	11.1	7.044	3.685	1.487	1.487	0.3926
1966	10.5	5.235	3.427	1.304	0.9062	0.2573
1967	10.67	6.102	3.912	1.747	1.267	0.3546
1968	61.15	31.17	11.05	7.298	4.88	1.209
1969	29.49	18.03	5.912	4.455	3.281	0.8386
1970	10.72	5.101	3.395	1.678	1.139	0.305
1971	52.45	24.45	8.287	3.291	2.201	0.5772
1972	41.21	23.9	7.718	4.26	3.025	0.7669
1973	64.36	33.91	10.4	4.711	3.257	0.8187
1974	11.5	7.68	3.754	1.661	1.51	0.3799
1975	47.41	25.85	9.037	3.31	2.22	0.5545
1976	27.22	17.06	6.949	2.974	1.997	0.5042
1977	14.04	7.919	3.789	2.321	1.624	0.4466
1978	52.33	32.82	9.852	3.827	2.644	0.6796
1979	10.45	5.018	3.283	1.249	1.11	0.3433
1980	19.39	11.15	3.776	2.638	1.77	0.4575
1981	14.61	10.12	3.965	1.471	1.665	0.4392
1982	13.33	7.068	4.301	2.106	1.536	0.4488
1983	22.99	13.27	3.713	3.206	2.527	0.6628
1984	10.6	5.267	3.426	1.296	0.8678	0.2445
1985	165	79.49	20.41	7.571	5.089	1.294
1986	80.64	41.65	12	4.594	3.09	0.7809
1987	84.3	46.72	13.91	6.147	4.115	1.057
1988	55.21	32.7	9.157	5.298	3.643	0.9088
1989	19.95	11.77	5.412	3.062	2.329	0.5821
1990	10.31	4.774	3.085	1.114	0.7437	0.1912

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	165	84.05	24.15	9.832	6.656	1.665
0.0645161290322581	142	79.49	20.41	7.571	5.089	1.294
0.0967741935483871	84.3	46.72	13.91	7.298	4.88	1.209
0.129032258064516	80.64	41.65	12	6.147	4.115	1.057
0.161290322580645	64.36	33.91	11.05	5.298	3.643	0.9088
0.193548387096774	61.15	32.82	10.4	4.711	3.281	0.8386
0.225806451612903	55.21	32.7	9.852	4.594	3.257	0.8187
0.258064516129032	52.45	31.17	9.157	4.455	3.09	0.7809
0.290322580645161	52.33	25.85	9.037	4.26	3.025	0.7669

0.32258064516129	47.41	24.45	8.287	3.827	2.684	0.6921
0.354838709677419	41.21	24.12	7.718	3.651	2.644	0.6796
0.387096774193548	39.62	23.9	6.949	3.31	2.527	0.6628
0.419354838709677	29.49	18.03	6.867	3.291	2.329	0.5821
0.451612903225806	27.22	17.06	5.912	3.206	2.22	0.5772
0.483870967741936	22.99	13.27	5.412	3.062	2.201	0.5545
0.516129032258065	19.95	11.77	4.301	2.974	1.997	0.5042
0.548387096774194	19.39	11.22	4.135	2.638	1.975	0.487
0.580645161290323	18.69	11.15	3.965	2.321	1.77	0.4575
0.612903225806452	14.61	10.12	3.912	2.184	1.665	0.4488
0.645161290322581	14.04	7.919	3.789	2.106	1.624	0.4466
0.67741935483871	13.33	7.68	3.776	2.087	1.536	0.4392
0.709677419354839	13.03	7.068	3.754	1.747	1.51	0.3926
0.741935483870968	11.5	7.044	3.713	1.678	1.487	0.3827
0.774193548387097	11.1	6.384	3.685	1.661	1.46	0.3799
0.806451612903226	10.72	6.102	3.548	1.487	1.267	0.3546
0.838709677419355	10.67	5.267	3.427	1.471	1.139	0.3433
0.870967741935484	10.6	5.235	3.426	1.304	1.11	0.305
0.903225806451613	10.5	5.101	3.395	1.296	0.9062	0.2573
0.935483870967742	10.45	5.018	3.283	1.249	0.8678	0.2445
0.967741935483871	10.31	4.774	3.085	1.114	0.7437	0.1912

0.1 83.934 46.213 13.719 7.1829 4.8035 1.1938

Average of yearly averages: 0.6240533333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLstrawberry_DWA_1

Metfile: w12842.dvf

PRZM scenario: FLstrawberry_WirrigSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	1.7	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-10	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1 apprate 1.7 kg/ha
Interval 2 interval 7 days Set to 0 or delete line for single app.
app. rate 2 apprate 1.7 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

NY Grapes

stored as ChlorothalonilNYGrapes_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: NYGrapesSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w14860.dvf modified Wednesday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	11.28	5.971	4.016	1.476	1.035	0.2777
1962	44.96	28.17	9.984	4.916	3.709	1.111
1963	17.77	9.352	4.957	2.087	1.451	0.5703
1964	83.46	47.86	14.44	6.285	4.521	1.368
1965	10.98	6.106	4.341	1.914	1.319	0.5963
1966	22.25	12.27	4.645	2.659	1.911	0.6135
1967	11.04	6.178	4.343	2.014	1.52	0.4982
1968	11.69	7.667	4.552	1.854	1.285	0.387
1969	11.11	6.004	3.996	1.478	1.01	0.3081
1970	41.57	22.97	9.715	4.362	3.318	0.9669
1971	30.94	17.49	7.978	3.267	2.358	0.7755
1972	10.95	6.078	4.643	1.885	1.536	0.5
1973	10.91	5.836	3.907	1.863	1.295	0.3765
1974	16.27	9.153	4.045	2.481	1.79	0.5711
1975	25.65	17.57	5.769	4.066	2.897	0.8846
1976	15.61	8.934	5.311	2.259	1.62	0.539
1977	39.99	24.24	14.04	6.548	4.947	1.437
1978	54.74	28.84	9.49	4.559	3.512	1.239
1979	45.89	30.67	10.23	5.856	4.606	1.465
1980	61.02	32.81	11.67	5.501	3.967	1.285
1981	18.87	11.25	5.603	2.727	2.107	0.741
1982	22.66	14.25	5.924	2.576	1.874	0.609
1983	60.91	31.06	11.72	5.131	3.891	1.204
1984	17.13	10.73	3.822	2.497	1.823	0.6641
1985	10.69	5.595	3.723	1.417	0.9679	0.4732
1986	27.25	15.95	5.906	2.217	2.204	0.6203
1987	67.74	36.55	11.22	5.628	4.215	1.286
1988	40.69	20.07	6.97	3.212	2.353	0.932
1989	11.14	6.051	3.642	1.916	1.528	0.5319
1990	29.08	15.78	5.986	4.14	3.053	0.8752

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		83.46	47.86	14.44	6.548	4.947 1.465
0.0645161290322581		67.74	36.55	14.04	6.285	4.606 1.437
0.0967741935483871		61.02	32.81	11.72	5.856	4.521 1.368
0.129032258064516		60.91	31.06	11.67	5.628	4.215 1.286
0.161290322580645		54.74	30.67	11.22	5.501	3.967 1.285
0.193548387096774		45.89	28.84	10.23	5.131	3.891 1.239
0.225806451612903		44.96	28.17	9.984	4.916	3.709 1.204
0.258064516129032		41.57	24.24	9.715	4.559	3.512 1.111
0.290322580645161		40.69	22.97	9.49	4.362	3.318 0.9669

0.32258064516129	39.99	20.07	7.978	4.14	3.053	0.932
0.354838709677419	30.94	17.57	6.97	4.066	2.897	0.8846
0.387096774193548	29.08	17.49	5.986	3.267	2.358	0.8752
0.419354838709677	27.25	15.95	5.924	3.212	2.353	0.7755
0.451612903225806	25.65	15.78	5.906	2.727	2.204	0.741
0.483870967741936	22.66	14.25	5.769	2.659	2.107	0.6641
0.516129032258065	22.25	12.27	5.603	2.576	1.911	0.6203
0.548387096774194	18.87	11.25	5.311	2.497	1.874	0.6135
0.580645161290323	17.77	10.73	4.957	2.481	1.823	0.609
0.612903225806452	17.13	9.352	4.645	2.259	1.79	0.5963
0.645161290322581	16.27	9.153	4.643	2.217	1.62	0.5711
0.67741935483871	15.61	8.934	4.552	2.087	1.536	0.5703
0.709677419354839	11.69	7.667	4.343	2.014	1.528	0.539
0.741935483870968	11.28	6.178	4.341	1.916	1.52	0.5319
0.774193548387097	11.14	6.106	4.045	1.914	1.451	0.5
0.806451612903226	11.11	6.078	4.016	1.885	1.319	0.4982
0.838709677419355	11.04	6.051	3.996	1.863	1.295	0.4732
0.870967741935484	10.98	6.004	3.907	1.854	1.285	0.387
0.903225806451613	10.95	5.971	3.822	1.478	1.035	0.3765
0.935483870967742	10.91	5.836	3.723	1.476	1.01	0.3081
0.967741935483871	10.69	5.595	3.642	1.417	0.9679	0.2777

0.1 61.009 32.635 11.715 5.8332 4.4904 1.3598

Average of yearly averages: 0.790213333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilNYGrapes_DWA_1

Metfile: w14860.dvf

PRZM scenario: NYGrapesSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	1.7	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-7	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.

app. rate 1 apprate 1.7 kg/ha
Interval 2 interval 7 days Set to 0 or delete line for single app.
app. rate 2 apprate 1.7 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

SCI-GROW OUTPUT

Chlorothalonil on Bulb Vegetables

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 12:53: 9

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
----------------------------	------------------------	------------------------	------------	--------------------------------

0.750	20.0	15.000	2.13E+02	13.0
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groundwater screening cond (ppb) = 7.09E-01

Chlorothalonil on Bushberry

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 12:53:26

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
----------------------------	------------------------	------------------------	------------	--------------------------------

3.000	3.0	9.000	2.13E+02	13.0
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groundwater screening cond (ppb) = 4.25E-01

Chlorothalonil on Low Growing Berries

SciGrow version 2.3

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 12:53:53

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
----------------------------	------------------------	------------------------	------------	--------------------------------

1.500	3.0	4.500	2.13E+02	13.0
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groundwater screening cond (ppb) = 2.13E-01

SUPPLEMENT A

The current drinking water assessment (DWA) for chlorothalonil (DP Barcode D346321) uses revised input parameters to accurately reflect all scientifically available data, follow the most current input parameter guidance, and correct all erroneous values used in the previous DWA (DP Barcode D346321). An explanation for each of the input parameter revisions is provided in this supplemental section. A comparison of the input parameters used in the previous DWA and those used in the current assessment are highlighted in **Table SA1**. All output files are provided in **Appendix B** for the proposed new uses (bulb vegetables, bushberry, and low growing berry) and updated horseradish and turf output files are provided in **Supplement B**.

Water Solubility

The water solubility of chlorothalonil is correctly listed as 0.8 mg/L at 25 °C in **Table 5** of the previous DWA; however, a value of 8 mg/L was used in PRZM-EXAM modeling and is reflected in estimated drinking water calculations (EDWCs) reported in the previous DWA. This is shown in the surface water model output files provided at the end of the previous DWA. Presumably this 10 x factor was used in accordance with previous input parameter guidance. The value used in the PRZM-EXAMS model estimations for this assessment is 0.8 mg/L.

Soil Partition Coefficient

For the previous DWA, the soil partition coefficient value used for total toxic chlorothalonil residues in SCI-GROW modeling is 351 mL/g, the lowest value of the three experimentally determined partition coefficients for SDS-3701. The K_{oc} values used in the previous assessment were based on calculated average. In this assessment the K_{oc} values were determined using a best fit linear regression analysis. Furthermore, a recently reviewed study (MRID 44483405) was incorporated and the input parameter recalculated. All the values are provided in **Table 3** of the DWA for comparison. The K_{oc} values for SDS-3701 because data indicate that it is more mobile than chlorothalonil. Since the experimentally determined K_{oc} values for SDS-3701 show more than a three-fold difference, the lowest value (213 mL/g) is used in SCI-GROW modeling.

An average K_{oc} value (554 mL/g) for SDS-3701 is used in the PRZM-EXAMS modeling.

Aerobic Soil Metabolism Half-life

The mean aerobic soil metabolism half-life value for chlorothalonil used in previous SCI-GROW estimations is 54 days, the mean value of eight reported soil metabolism half-lives. Current input parameter guidance for SCI-GROW states “If three or less aerobic soil metabolism half-life values are available, use the mean value. If there are four or more half-lives available, use the median value.” Since there are eight half-life values available, the median value should have been used. In addition, further analysis shows that most of the estimated aerobic soil metabolism half-life values used for the total toxic chlorothalonil residues were determined inaccurately. The calculation errors occurred when an equation was mistyped into an Excel worksheet and

perpetuated by coping and pasting equations into multiple worksheets (DER 47207703, **Attachment 2**) and used to calculate half-life values for several different soil metabolism studies. Furthermore, all of the half-life values were estimated using a linear fit equation; nevertheless, a non-linear fit equation better fits the data and more accurately represents the observed disappearance time of half (DT_{50}) of the total toxic chlorothalonil residues. The total toxic chlorothalonil residues half-life values used to determine the input parameter in the previous DWA are shown in **Table SA2** along with the corresponding values used in the this DWA. There are also six new half-life values included this assessment from two recently reviewed supplemental studies (MRIDs 43879601 and 47207702). A value of 13 days is used for SCI-GROW model estimations reported in the current DWA.

The upper 90th percentile confidence bound on the mean aerobic soil metabolism half-life value for chlorothalonil was calculated incorrectly for the PRZM-EXAMS input value and is reflected in EDWCs reported in the previous DWA. The equation used in the previous assessment is $53.8 + ((1.895 \times 27.2) / \sqrt{8}) = 72$ days. Based on the aerobic soil metabolism half-life values reported in the previous DWA, the equation should have been $54 + ((1.415 \times 27) / \sqrt{8}) = 68$ days. Taking into account the additional aerobic soil metabolism half-life data (MRIDs 43879601 and 47207702), using updated non-linear half-life values, the correct half-life input value is $24 + ((1.282 \times 31) / \sqrt{14}) = 33$ days. A value of 33 days is used for the aerobic soil metabolism half-life value in PRZM-EXAM model estimations and the results are reported in the new DWA.

Studies submitted to the agency indicate that the aerobic soil metabolism half-life is dependent on application rate (MRIDs 43879601 and 47207702). Since field application rates for chlorothalonil vary dramatically depending on the registered crop use there is uncertainty in determining a representative half-life value to use in modeling. Furthermore, the application rates used in the aerobic soil metabolism studies submitted to the agency vary significantly. Although the agency currently requests that studies be conducted at the maximum field application rate, the available data do not reflect the maximum application rates currently registered or those proposed. Application rates for acceptable and supplemental studies range from 1 to 39 mg a.i./kg with half-lives ranging from 1 to 80 days, respectively. The highest “current” chlorothalonil application rate is 11.3 lbs a.i./a for the maximum single application rate and 73 lbs a.i./a for the season maximum application rate registered for golf course greens. For this reason, all acceptable of supplemental aerobic soil metabolism data available for the total toxic chlorothalonil residues have been used to estimate the aerobic half-life input value used in modeling scenarios supporting this DWA. The application rates used in each of the acceptable and supplemental aerobic soil metabolism studies used in this assessment are highlighted in **Table SA2**.

Aerobic Aquatic Metabolism Half-life

The upper 90th percentile confidence bound on the mean aerobic aquatic metabolism half-life value for chlorothalonil was also calculated incorrectly for the PRZM-EXAMS input value and is reflected in EWDCs reported in the previous DWA. The equation used in the previous assessment is $32 + ((2.13 \times 43.5) / \sqrt{5}) = 73$ days. In addition, individual half-life values used to calculate the input half-life value are incorrect. It is likely that the table and graph labeling errors in the DER contributed to the previous reviewer transposing hours to days for the half-life values. Furthermore, some of other half-life values can not be corroborated. When the corresponding DERs and studies were reevaluated half-life values were recalculated. These values were different from those originally reported. The equation that is used to calculate the current input value of the aerobic aquatic metabolism half-life for PRZM-EXAM modeling is $0.75 + ((1.476 \times 1.18) / \sqrt{6}) = 1.5$ days. The application rates used in each of the acceptable and supplemental aerobic aquatic metabolism studies and the equations used to calculate half-lives are provided in **Table SA3**.

Anaerobic Aquatic Metabolism Half-life

The upper 90th percentile confidence bound on the mean value for chlorothalonil was calculated incorrectly for the PRZM-EXAMS anaerobic aquatic metabolism half-life value. The equation used in the previous assessment is $91 + ((6.3 \times 46) / \sqrt{2}) = 296$ days. Furthermore, the individual half-life values used to calculate the input half-life value are incorrect. When the corresponding DERs and studies were reevaluated the half-life values were recalculated to reflect the non-linear best fit equations which corresponds well with the observed DT₅₀. The equation used to calculate the PRZM-EXAM input value for the anaerobic aquatic metabolism study is $50.5 + ((3.078 \times 46) / \sqrt{2}) = 151$ day.

Table SA1: SCI-GROW and PRZM-EXAM Input Parameters for Total Toxic Chlorothalonil Residues Used in the Previous DWA (D346321) Along With Input Parameters Used in the Current DWA.

Parameter	Value Used in Previous Assessment	Value Used in Current Assessment	Source
Molecular Weight	265.9 g/mol	265.9 g/mol	RED, EPA 738-R-99004, April, 1999
Water Solubility (25 °C)	8 mg/L	0.8 mg/L	Chlorothalonil RED, EPA 738-R-99004, April, 1999
Vapor Pressure	5.72×10^{-7} torr	5.72×10^{-7} torr	00153732
Henry's Law Constant	2.6×10^{-7} atm - m ³ /mol	2.6×10^{-7} atm - m ³ /mol	RED, EPA 738-R-99004, April, 1999
Hydrolysis Half-life (t _{1/2}) pH 7	Stable, 0	Stable, 0	MRID 0040539
Aquatic Photolysis Half-life (t _{1/2}) pH 7	0.4 days (11 hours)	0.5 days (11 hours)	MRID 45710223 (40183418)
Soil Partition Coefficient (K _{oc})	SCI-GROW: 351 mL/g lowest value of 718, 351, and 559 mL/g PRZM-EXAMS: 543 mL/g mean value of 718, 351, and 559 mL/g	SCI-GROW: 213 mL/g lowest value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g PRZM-EXAMS: 554 mean value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g	MRID 44483405 (degrade) and 46786901 (degrade)
Aerobic Soil Metabolism Half-life (t _{1/2})	SCI-GROW: 54 days mean value of 89, 51, 42, 31, 21, 107, 48, and 45 days PRZM/EXAMS: 72 days upper 90 th percentile confidence bound on the mean value of 89, 51, 42, 31, 21, 107, 48, and 45 days	SCI-GROW: 13 days median value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days PRZM-EXAMS: 33 days upper 90 th percentile confidence bound on the mean value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days	MRIDs 00087351 & 47207703
Aerobic Aquatic Metabolism Half-life (t _{1/2})	PRZM-EXAMS: 73 days upper 90 th percentile confidence bound on the mean value of 35.5, 106, 12.8, 3.3, 2.4 days.	PRZM-EXAMS: 1.5 days upper 90 th percentile confidence bound on the mean value of 3.1, 0.8, 0.3, 0.2, 0.1, and 0.1 days	MRIDs 42226101, 45908001, and 47207701
Anaerobic Aquatic Metabolism Half-life	PRZM-EXAM: 296 days upper 90 th percentile confidence bound on mean value of 123 and 58 days.	PRZM-EXAMS: 151 days upper 90 th percentile confidence bound on mean value of 83 and 18 days	MRID 00147975

Table SA2: Aerobic Soil Metabolism Half-lives For Chlorothalonil Used to Determine Half-life Input Parameter Used in the Previous DWA (D346321) Along With Half-lives Used to Determine the Input Parameter Used in the Current DWA.

Soil Sample	t _{1/2} Used in Previous DWA (days)	Line Fit Used to Estimate Previous DWA t _{1/2}	Observed DT ₅₀	t _{1/2} Used in Current DWA (days)	Line Fit Used to Estimate Current DWA t ^{1/2}	Experimental Application Rate ^a	MRID
Chamberlain HL	107 days	Linear $y = -0.0065x + 3.3856$ $r^2 = 0.6635$	2 days	3 days	Non-linear $y = 73.3895e^{-0.2494x}$ $r^2 = 0.5011$	1 mg a.i./kg (1.5 kg a.i./ha) ^b	47207703
18 Acres HL	21 days	Linear $y = -0.0328x + 3.4959$ $r^2 = 0.6997$	1 day	2 days	Non-linear $y = 83.4219e^{-0.4616x}$ $r^2 = 0.9621$	1 mg a.i./kg (1.5 kg a.i./ha) ^b	47207703
ERTC HL	48 days	Linear $y = -0.0143x + 3.5654$ $r^2 = 0.6488$	4 days	3 days	Non-linear $y = 89.0512e^{-0.2196x}$ $r^2 = 0.8676$	1 mg a.i./kg (1.5 kg a.i./ha) ^b	47207703
Munster HL	45 days	Linear $y = -0.0154x + 3.6359$ $r^2 = 0.6523$	4 days	4 days	Non-linear $y = 91.6918e^{-0.1696x}$ $r^2 = 0.9145$	1 mg a.i./kg (1.5 kg a.i./ha) ^b	47207703
Loam	51 days	Linear $y = -0.0135x + 4.4522$ $r^2 = 0.9315$	45 days	47 days	Non-linear $y = 88.1413e^{-0.0146x}$ $r^2 = 0.9067$	39 mg a.i./kg (44 kg a.i./ha) ^b	00087351
OH Sandy Loam	31 days	Linear $y = -0.0222x + 4.1327$ $r^2 = 0.8015$	10 days	16 days	Non-linear $y = 87.5128e^{-0.0432x}$ $r^2 = 0.9176$	39 mg a.i./kg (44 kg a.i./ha) ^b	00087351
Silt Loam	89 days	Linear $y = -0.0076x + 4.5101$ $r^2 = 0.8839$	80 days	87 days	Non-linear $y = 91.7321e^{-0.0080x}$ $r^2 = 0.8901$	39 mg a.i./kg (44 kg a.i./ha) ^b	00087351
TX Sandy Loam	42 days	Linear $y = -0.0167x + 4.4792$ $r^2 = 0.9477$	42 days	42 days	Linear $y = -0.0167x + 4.4792$ $r^2 = 0.9477$	39 mg a.i./kg (44 kg a.i./ha) ^b	00087351

18 Acres	NA	NA	<2 days	1 day	Non-linear $y = 100.4282e^{-0.8043x}$ $r^2 = 0.9310$	0.1 mg a.i./kg	47207702 ^c
			<2 days	2 days	Non-linear $y = 97.8734e^{-0.2905x}$ $r^2 = 0.8969$	1 mg a.i./kg	
			20 days	16 days	Non-linear $y = 96.8130e^{-0.0425x}$ $r^2 = 0.9216$	10 mg a.i./kg	
			30 days	57 days	Non-linear $y = 88.1557e^{-0.0121x}$ $r^2 = 0.5882$	25 mg a.i./kg	
OH Loamy Sand	NA	NA	<4 days	9 days	Non-linear $y = 75.5841e^{-0.0744x}$ $r^2 = 0.7971$	1 mg a.i./kg	43879601
			7 days	45 days	Non-linear $y = 73.3683e^{-0.0155x}$ $r^2 = 0.8448$	10 mg a.i./kg	

a. Supplemental studies (MRIDs 43879601 and 47207702) indicate that aerobic metabolism rates for chlorothalonil are dependent on application rate. Maximum single chlorothalonil application rate currently registered is 11.3 lbs a.i./acre for turf applications. Maximum seasonal chlorothalonil application rate is 73 lbs a.i./acre for golf course greens.

b. Registrant reported.

c. Authors do not report the individual [¹⁴C] compounds until 2 days posttreatment. For day 0, the total toxic chlorothalonil residues were assumed to be all [¹⁴C] material recovered since the individual compounds were not identified.

*Non-linear equation: single exponential decay, 2 parameter equation

Table SA3: Aerobic Aquatic Metabolism Half-lives For Chlorothalonil Used to Determine Half-life Input Parameter Used in the Previous DWA (D346321) Along With Half-lives Used to Determine the Input Parameter Used in the Current DWA.

Sample System	t _{1/2} Used in Previous DWA (days) ^a	Line Fit Used to Estimate Previous DWA t _{1/2}	Observed DT ₅₀ (days)	t _{1/2} Used in Current DWA (days)	Line Fit Used to Estimate Current DWA t ^{1/2}	Experimental Application Rate ^a	MRID
Silt Loam OH	--		<1	0.08	Non-linear $y = 83.2305e^{-8.3646x}$ $r^2 = 0.9130$	0.6 mg a.i./L	42226101
Silt Loam VA ^b	--	--	<1	0.3	Non-linear $y = 29.5177e^{-0.2.1121x}$ $r^2 = 0.6875$	0.6 mg a.i./L	42226101
Bury Pond	--	--	1	0.8	Non-linear $y = 88.5884e^{-0.8342x}$ $r^2 = 0.0723$	0.03 mg a.i./L	47207701
Emperor Lake	--	--	3	3.1	Non-linear $y = 90.3306e^{-0.2256x}$ $r^2 = 0.09976$	0.03 mg a.i./L	47207701
Houghton Meadow ^c	3.3	--	>0.25	0.15	Non-linear $y = 73.4637e^{-4.7099x}$ $r^2 = 0.5818$	0.83 mg a.i./L	45908001
Bury Pond ^c	2.4	--	>0.25	0.08	Non-linear $y = 86.2417e^{-8.8649x}$ $r^2 = 0.6091$	0.83 mg a.i./L	45908001

- a. Three additional aerobic aquatic half-life values were reported in the previous assessment, 35.5, 106, and 12.8; however, it can be determine where there values originated from. A reevaluation of the cited source material could not be determined.
- b. This is a salt water system.

SUPPLEMENT B

This supplemental section provides a revised drinking water assessment (DWA) for chlorothalonil on horseradish and turf, crops previously determined to give high estimated drinking water concentrations [(EDWCs) DP Barcode 346231].

Both chlorothalonil and a degradation product of toxicological concern, 4-hydroxy-2,5,6-trichloro-1,3-dicyanobenzene (SDS-3701) are considered in this assessment. These compounds are referred to collectively as total toxic chlorothalonil residues and their structures are shown in **Appendix A**. This DWA is based on Tier II surface water and Tier I ground water model simulations. Results are summarized in **Table SB1**.

Table SB1: Tier II PCA Corrected Surface Water EDWCs of the Total Toxic Chlorothalonil Residues.

Crop	Scenario (application date)	Peak EDWC µg/L (ppb)	Yearly Mean µg/L (ppb)	Average of Yearly Means µg/L (ppb)
Horseradish	FL Carrot 25/10	316	6	3
	<i>Previous FL Carrot 25/10</i>	443	68	36
Turf	PA Golf Course Scenario 2	287	4	3
	PA Golf Course Scenario 2	277	4	3

* Bold font indicates the highest estimated value.

Because of a number of the changes to the input parameters for chlorothalonil, crops previously determined to give high EDWCs resulting from chlorothalonil uses have been remolded using current label application rates (i.e. horseradish and turf). This DWA for chlorothalonil on horseradish and turf was completed using the same updated input parameters used in the DWA for the proposed new uses on bulb vegetables, bushberry, and low growing berry (DP barcode 370488). Specific input parameter changes are discussed in **Supplement A**. Current label application rates for horseradish and turf are provided in **Table SB2**. The input parameters and the scenarios used for this assessment are shown in **Table SB3**.

Chlorothalonil uses on horseradish give the most conservative EDWCs of the remolded crops. Note that, revised EDWCs for horseradish are lower than previously reported estimates (DP Barcode 346321). The EDWCs resulting from chlorothalonil applications on horseradish and turf are shown in **Table SB4** while applications of chlorothalonil to golf courses are provided in **Table S5**.

In summary, Tier II EDWCs for total toxic chlorothalonil residues are not expected to exceed 316 µg/L for the 1 in 10 year peak concentration, 6 µg/L for the 1 in 10 year annual average concentration, and 3 µg/L for the 30 year annual average from chlorothalonil applications on horseradish.

Teir I EDWC in ground water resulting from chlorothalonil uses on horseradish and turf are not expected to be >3.5 µg/L from chlorothalonil uses on golf course greens. The revised ground water EDWC is higher than previously reported estimates. Ground water EDWC from chlorothalonil applications are not expected to exceed 3.5 µg/L.

Table SB2: Proposed Application Rates for Chlorothalonil Use on Horseradish and Turf.

Crop	Application Rate Range lbs a.i./A	Maximum Single Application Rate lbs a.i./A	Maximum Application Rate Per Growing Season lbs a.i./A	Maximum Number of Applications ^a	Minimum Interval	Application Technique
Horseradish	2.25	2.25	18	8	7 days	Aerial/Chemigation/Ground
Turf ^{b,c}	up to 11.3	11.3	26	4 ^d	7 days	Aerial/Chemigation/Ground
Turf: Sod Farms	up to 11.3	11.3 ^e	13	2	7 days	Aerial/Chemigation/Ground
Turf: Golf Course Tees	up to 11.3	11.3 ^e	52	8	7 days ^f	Ground
Turf: Golf Course Greens	up to 11.3	11.3 ^e	73	8	7 days ^f	Ground

a. Values is based on maximum application rate.

b. Uses include golf course fairways, lawns (around commercial and industrial buildings, other turf grasses (professional and collegiate athletic fields), and ornamental turf grasses.

c. Only one application of a rate greater than 7.3 lbs a.i./acre per growing season is permitted.

d. Value is not based on maximum application rate; the application rate used is 6.5 lbs a.i./acre.

e. Only two application of a rate greater than 7.3 lbs a.i./acre per growing season is permitted.

f. If an application rate greater than 7.3 lbs a.i./acre is used more than once the minimum interval between applications is 14 days

Table SB3: Input Parameters for SCI-GROW and PRZM-EXAM Used to Estimate Groundwater Concentrations for Total Toxic Chlorothalonil Residues from Uses on Horseradish and Turf.

Parameter	Value Used in Current Assessment	Source
Molecular Weight	265.9 g/mol	RED, EPA 738-R-99004, April, 1999
Water Solubility (25 °C)	0.8 mg/L	Chlorothalonil RED, EPA 738-R-99004, April, 1999
Vapor Pressure	5.72×10^{-7} torr	00153732
Henry's Law Constant	2.6×10^{-7} atm - m ³ /mol	RED, EPA 738-R-99004, April, 1999
Hydrolysis Half-life (t _{1/2}) pH 7	Stable, 0	Chlorothalonil: MRID 0040539
Aquatic Photolysis Half-life (t _{1/2}) pH 7	PRZM-EXAMS: 0.5 days (11 hours)	Chlorothalonil & Total Toxic Residues: MRID 45710223
Soil Partition Coefficient (K _{oc})	SCI-GROW: 213 mL/g lowest value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g PRZM-EXAMS: 554 mean value of 2114, 628, 343, 328, 321, 263, 219, and 213 mL/g	Chlorothalonil: EPA Acc. 29406 SDS-3701: 44483405 and 46786901
Aerobic Soil Metabolism Half-life (t _{1/2})	SCI-GROW: 13 days median value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days PRZM-EXAMS: 33 days upper 90 th percentile confidence bound on the mean value of 87, 57, 51, 45, 42, 16, 16, 9, 4, 3, 3, 2, 2, and 1 days	Total Toxic Residues: MRIDs 00040547, 00087351 (parent only), 43879601, 47207702, and 47207703
Aerobic Aquatic Metabolism Half-life (t _{1/2})	PRZM-EXAMS: 1.5 days upper 90 th percentile confidence bound on the mean value of 3.1, 0.8, 0.3, 0.2, 0.1, and 0.1 days	Total Toxic Residues: MRIDs 42226101, 45908001, and 47207701
Anaerobic Aquatic Metabolism Half-life	PRZM-EXAMS: 151 days upper 90 th percentile confidence bound on mean value of 83 and 18 days	Total Toxic Residues: MRID 00147975
Application Type and Depth of Incorporation	aerial application, 0	EFED Guidance
Spray Drift Fraction	0.064/0.16 (ground/aerial) ^a	EFED Guidance
Application Efficiency	0.99/0.95 (ground/aerial) ^a	EFED Guidance
PCA value	Horseradish 87% (multiple crop) Turf 100% <u>Golf Course^b</u> Fairways, Greens, and Tees 34%	EFED Guidance
Application Rate	Horseradish SCI-GROW: 8 applications at 2.25 lbs a.i./A PRZM-EXAMS: 8 applications at 2.25 lbs a.i./A (2.52 kg a.i./ha) Turf SCI-GROW: 4 applications at 6.5 lbs a.i./A <u>Scenario 1</u> PRZM-EXAMS: 4 applications at 6.5 lbs a.i./A (7.3 kg a.i./ha) <u>Scenario 2</u> PRZM-EXAMS: 1 applications at 11.3 lbs a.i./A (12.7 kg a.i./ha),	Proposed Label

	<p>and two applications at 7.3 lbs a.i./A (8.2 kg a.i./ha)</p> <p>Sod Farms</p> <p>SCI-GROW: 2 applications at 6.5 lbs a.i./A (7.3 kg a.i./ha)</p> <p><u>Scenario 1</u></p> <p>PRZM-EXAMS: 2 applications at 6.5 lbs a.i./A (7.3 kg a.i./ha)</p> <p><u>Scenario 2</u></p> <p>PRZM-EXAMS: 1 applications at 11.3 lbs a.i./A (12.7 kg a.i./ha), and one application at 1.7 a.i./A (1.9 kg a.i./ha)</p> <p>Golf Course</p> <p><i>Fairways</i></p> <p>SCI-GROW: 4 applications at 6.5 lbs a.i./A</p> <p><u>Scenario 1</u></p> <p>PRZM-EXAMS: 4 applications at 6.5 lbs a.i./A (7.3 kg a.i./ha)</p> <p><u>Scenario 2</u></p> <p>PRZM-EXAMS: 1 applications at 11.3 lbs a.i./A (12.7 kg a.i./ha), and two applications at 7.3 lbs a.i./A (8.2 kg a.i./ha)</p> <p><i>Greens</i></p> <p>SCI-GROW: 10 applications at 7.3 lbs a.i./A</p> <p><u>Scenario 1</u></p> <p>PRZM-EXAMS: 10 applications at 7.3 lbs a.i./A (8.0 kg a.i./ha)</p> <p><u>Scenario 2</u></p> <p>PRZM-EXAMS: one applications at 11.3 lbs a.i./A (12.7 kg a.i./ha), one application at 11.2 a.i./A (12.6 kg a.i./ha), six applications at 7.3 (8.0 kg a.i./ha), and one application at 6.7 (7.5 kg a.i./ha)</p> <p><i>Tees</i></p> <p>SCI-GROW: 8 applications at 6.5 lbs a.i./A</p> <p><u>Scenario 1</u></p> <p>PRZM-EXAMS: 8 applications at 6.5 lbs a.i./A (7.3 kg a.i./ha)</p> <p><u>Scenario 2</u></p> <p>PRZM-EXAMS: one applications at 11.3 lbs a.i./A (12.7 kg a.i./ha), one application at 11.2 a.i./A (12.6 kg a.i./ha), and four applications at 7.3 (8.2 kg a.i./ha)</p>	
Interval Between Applications	<p>Horseradish</p> <p>7 days</p> <p>Turf</p> <p>7 days</p> <p>Sod Farms</p> <p><u>Scenarios 1 & 2</u></p> <p>7 days</p> <p>Golf Course</p> <p><i>Fairways</i></p> <p><u>Scenarios 1 & 2</u></p> <p>7 days</p> <p><i>Greens</i></p> <p><u>Scenario 1</u></p> <p>7 days</p> <p><u>Scenario 2</u></p> <p>14 days (following application rates > 7.3 lbs a.i./acre), 7 days (following application rates ≤ 7.3 lbs a.i./acre)</p> <p><i>Tees</i></p> <p><u>Scenario 1</u></p> <p>7days</p> <p><u>Scenario 2</u></p> <p>14 days (following application rates > 7.3 lbs a.i./acre), 7 days (following application rates ≤ 7.3 lbs a.i./acre)</p>	Proposed Label

Date of First Application (DD/MM)	Horseradish		Proposed Label Location Specific Crop Profiles
	FL Carrot	25/10	
	Turf		
	FL Turf	15/5	
	PA Turf	15/5	

a. Chlorothalonil is assumed to be applied to golf courses using ground application methods.

b. *Golf Course Adjustment Factors for Simulated Aquatic Exposure Concentrations, December 7, 2005*

Table SB3: Tier II PCA Corrected EDWCs of the Total Toxic Chlorothalonil Residues.

Crop	Scenario	Peak EDWC µg/L (ppb)	Yearly Mean µg/L (ppb)	Average of Yearly Means µg/L (ppb)
Horseradish	FL Carrot 25/10	316	5.0	
	<i>Previous FL Carrot^a</i>	443	68	36
Turf	FL Turf 1	146	2.1	
	FL Turf 2	125	2.1	
	PA Turf 1	159	3.8	
	PA Turf 2	203	3.8	2.5
Turf: Sod Farms	FL Turf 1	51	1.0	<1
	FL Turf 2	75	1.0	<1
	PA Turf 1	106	2.0	1.3
	PA Turf 2	94	1.5	<1

a. The application date used in the previous DWA is 25/10 (MM/DD).

* Bold font indicates highest values

Table SB4: Tier II PCA EDWCs of the Total Toxic Chlorothalonil Residues.

Crop	Scenario	Peak EDWC µg/L (ppb)	Yearly Mean µg/L (ppb)	Average of Yearly Means µg/L (ppb)
Golf Course	FL Turf 1(fairways)	43	0.5	0.3
	FL Turf 1 (greens)	67	1.0	0.7
	FL Turf 1 (tees)	83	0.8	0.5
	FL Scenario 1 Total	192	2.3	1.4
	FL Turf 2 (fairways)	34	0.5	0.3
	FL Turf 2 (greens)	51	0.9	0.6
	FL Turf 2 (tees)	60	0.8	0.5
	FL Scenario 2 Total	145	2.3	1.3
	PA Turf 1 (fairways)	54	0.8	0.5
	PA Turf 1 (greens)	135	1.7	1.3
	PA Turf 1 (tees)	88	1.4	1.0
	PA Scenario 1 Total	277	3.8	2.8
	PA Turf 2 (fairways)	66	0.9	0.5
	PA Turf 2 (greens)	85	1.3	0.9
	PA Turf 2 (tees)	137	1.7	1.3
	PA Scenario 2 Total	287	4.0	2.7

PRZM/EXAMS OUTPUT

Chlorothalonil on Horseradish

FL Horseradish

stored as ChlorothalonilFLHorseradish_DWA_1.out

Chemical: Chlorothalonil

PRZM environment: FLcarrotSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w12844.dvf modified Wedday, 3 July 2002 at 10:04:30

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	26.59	15.28	8.125	6.335	4.239	1.045
1962	28.76	17.62	8.237	7.104	5.11	1.574
1963	150	45.15	22.51	14.13	9.915	2.678
1964	370	191	54.12	24.92	16.68	5.64
1965	139	86.69	29.01	15.07	10.38	2.742
1966	141	83.46	25.62	10.97	7.443	2.963
1967	31.95	17.75	7.72	6.013	4.022	1.621
1968	34.19	19.8	10.18	7.952	5.332	1.687
1969	101	54.75	23.84	16.45	11.03	4.232
1970	106	66.63	22.59	9.754	6.741	2.633
1971	165	115	38.15	17.06	11.67	2.984
1972	304	153	38.89	17.64	12.08	3.272
1973	25.06	13.41	7.638	6.675	4.669	1.402
1974	150	82.71	22.7	14.73	9.956	3.821
1975	48.3	25.09	11.63	8.054	5.391	1.363
1976	108	56.93	18.96	11.78	8.155	2.548
1977	247	127	46.34	27.36	18.58	5.448
1978	156	107	45.47	25.02	17.23	4.523
1979	117	65.55	23.23	12.16	8.15	2.282
1980	81.06	47.99	17.38	10.36	6.944	2.739
1981	209	119	35.86	19.08	13.2	3.59
1982	281	136	70.09	27.86	18.6	5.783
1983	117	80.08	27.86	18.97	13.13	4.903
1984	853	503	129	52.89	35.3	9.106
1985	28.21	14.69	6.321	4.986	3.349	1.175
1986	415	214	62.89	31.42	21.62	8.189
1987	222	116	36.8	17.23	11.52	3.151
1988	58.54	33.05	11.3	7.402	5.111	1.586
1989	64.26	43.64	15.36	9.024	6.442	1.73
1990	16.23	9.904	5.995	5.001	3.417	1.023

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	853	503	129	52.89	35.3	9.106
0.0645161290322581	415	214	70.09	31.42	21.62	8.189
0.0967741935483871	370	191	62.89	27.86	18.6	5.783
0.129032258064516	304	153	54.12	27.36	18.58	5.64
0.161290322580645	281	136	46.34	25.02	17.23	5.448
0.193548387096774	247	127	45.47	24.92	16.68	4.903
0.225806451612903	222	119	38.89	19.08	13.2	4.523

0.258064516129032	209	116	38.15	18.97	13.13	4.232
0.290322580645161	165	115	36.8	17.64	12.08	3.821
0.32258064516129	156	107	35.86	17.23	11.67	3.59
0.354838709677419	150	86.69	29.01	17.06	11.52	3.272
0.387096774193548	150	83.46	27.86	16.45	11.03	3.151
0.419354838709677	141	82.71	25.62	15.07	10.38	2.984
0.451612903225806	139	80.08	23.84	14.73	9.956	2.963
0.483870967741936	117	66.63	23.23	14.13	9.915	2.742
0.516129032258065	117	65.55	22.7	12.16	8.155	2.739
0.548387096774194	108	56.93	22.59	11.78	8.15	2.678
0.580645161290323	106	54.75	22.51	10.97	7.443	2.633
0.612903225806452	101	47.99	18.96	10.36	6.944	2.548
0.645161290322581	81.06	45.15	17.38	9.754	6.741	2.282
0.67741935483871	64.26	43.64	15.36	9.024	6.442	1.73
0.709677419354839	58.54	33.05	11.63	8.054	5.391	1.687
0.741935483870968	48.3	25.09	11.3	7.952	5.332	1.621
0.774193548387097	34.19	19.8	10.18	7.402	5.111	1.586
0.806451612903226	31.95	17.75	8.237	7.104	5.11	1.574
0.838709677419355	28.76	17.62	8.125	6.675	4.669	1.402
0.870967741935484	28.21	15.28	7.72	6.335	4.239	1.363
0.903225806451613	26.59	14.69	7.638	6.013	4.022	1.175
0.935483870967742	25.06	13.41	6.321	5.001	3.417	1.045
0.967741935483871	16.23	9.904	5.995	4.986	3.349	1.023

0.1 363.4 187.2 62.013 27.81 18.598 5.7687

Average of yearly averages: 3.247766666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLHorseradish_DWA_1

Metfile: w12844.dvf

PRZM scenario: FLcarrotSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	2.52	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	25-10	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	2.52	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.

app. rate 2	apprate	2.52	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	2.52	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	2.52	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	2.52	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	2.52	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.
app. rate 7	apprate	2.52	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

Chlorothalonil on Turf

FL Turf Scenario 1

stored as ChlorothalonilFLturfScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	45.12	22.41	14.69	8.145	5.507	1.373
1962	44.39	20.71	13.37	8.3	5.561	1.377
1963	55.97	33.17	14.56	9.337	6.251	1.548
1964	58.94	25.04	13.87	8.243	5.595	1.396
1965	45.24	22.66	15.17	8.354	5.579	1.381
1966	90.25	41.58	20.64	13.74	9.19	2.275
1967	48.06	22.13	15.34	7.02	4.937	1.225
1968	151	84.54	29.25	12.36	8.257	2.039
1969	70.49	29.75	16.31	7.374	4.923	1.286
1970	44.4	20.71	13.28	6.071	4.052	1.003
1971	45.21	22.59	14.84	8.171	5.456	1.364
1972	69.77	30.54	14.41	8.941	5.97	1.514
1973	44.72	21.5	13.91	6.37	4.285	1.066
1974	44.51	20.99	13.62	6.546	4.38	1.087
1975	44.33	20.54	13.21	6.233	4.161	1.031
1976	209	97.27	32.94	13.9	9.285	2.298
1977	47.05	22.67	14.84	6.579	4.67	1.19
1978	65.18	27.25	14.32	6.682	4.468	1.109
1979	44.65	21.34	13.81	7.32	4.977	1.233
1980	44.76	21.58	13.99	6.581	4.393	1.086
1981	45.44	22.38	14.5	6.465	4.325	1.122
1982	81.29	36.01	14.82	9.503	6.379	1.579
1983	104	52.1	24.89	10.62	7.129	1.769
1984	171	86.51	31.99	12.91	8.643	2.137
1985	44.46	20.86	13.37	6.656	4.443	1.102
1986	44.92	21.94	14.24	7.066	5.013	1.24
1987	44.78	21.63	13.99	6.37	4.252	1.052
1988	45.22	22.6	14.74	6.683	4.461	1.105
1989	44.61	21.23	13.7	6.264	4.181	1.082
1990	44.16	20.1	12.85	5.945	3.97	0.9901

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	209	97.27	32.94	13.9	9.285	2.298
0.0645161290322581	171	86.51	31.99	13.74	9.19	2.275
0.0967741935483871	151	84.54	29.25	12.91	8.643	2.137
0.129032258064516	104	52.1	24.89	12.36	8.257	2.039
0.161290322580645	90.25	41.58	20.64	10.62	7.129	1.769
0.193548387096774	81.29	36.01	16.31	9.503	6.379	1.579
0.225806451612903	70.49	33.17	15.34	9.337	6.251	1.548
0.258064516129032	69.77	30.54	15.17	8.941	5.97	1.514
0.290322580645161	65.18	29.75	14.84	8.354	5.595	1.396
0.32258064516129	58.94	27.25	14.84	8.3	5.579	1.381

0.354838709677419	55.97	25.04	14.82	8.243	5.561	1.377
0.387096774193548	48.06	22.67	14.74	8.171	5.507	1.373
0.419354838709677	47.05	22.66	14.69	8.145	5.456	1.364
0.451612903225806	45.44	22.6	14.56	7.374	5.013	1.286
0.483870967741936	45.24	22.59	14.5	7.32	4.977	1.24
0.516129032258065	45.22	22.41	14.41	7.066	4.937	1.233
0.548387096774194	45.21	22.38	14.32	7.02	4.923	1.225
0.580645161290323	45.12	22.13	14.24	6.683	4.67	1.19
0.612903225806452	44.92	21.94	13.99	6.682	4.468	1.122
0.645161290322581	44.78	21.63	13.99	6.656	4.461	1.109
0.67741935483871	44.76	21.58	13.91	6.581	4.443	1.105
0.709677419354839	44.72	21.5	13.87	6.579	4.393	1.102
0.741935483870968	44.65	21.34	13.81	6.546	4.38	1.087
0.774193548387097	44.61	21.23	13.7	6.465	4.325	1.086
0.806451612903226	44.51	20.99	13.62	6.37	4.285	1.082
0.838709677419355	44.46	20.86	13.37	6.37	4.252	1.066
0.870967741935484	44.4	20.71	13.37	6.264	4.181	1.052
0.903225806451613	44.39	20.71	13.28	6.233	4.161	1.031
0.935483870967742	44.33	20.54	13.21	6.071	4.052	1.003
0.967741935483871	44.16	20.1	12.85	5.945	3.97	0.9901

0.1 146.3 81.296 28.814 12.855 8.6044 2.1272

Average of yearly averages: 1.368636666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLturfScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	7.3	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	7.3	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	7.3	kg/ha	

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

FL Turf Scenario 2

stored as ChlorothalonilFLturfScenario_2.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	74.06	36.84	19.53	8.218	5.551	1.383
1962	74.06	34.57	17.74	8.256	5.53	1.369
1963	74.06	35.03	19.52	8.563	5.725	1.417
1964	74.06	35.68	18.51	8.445	5.726	1.428
1965	74.06	37.17	19.8	8.505	5.679	1.406
1966	74.06	36.29	19.07	12.73	8.509	2.106
1967	74.06	35.54	20	7.273	5.029	1.247
1968	149	77.47	28.82	13.22	8.831	2.18
1969	74.06	36.09	19.62	7.662	5.114	1.32
1970	74.06	34.61	17.7	6.259	4.178	1.034
1971	75.44	37.77	19.85	8.199	5.474	1.366
1972	74.06	36.91	19.25	8.816	5.886	1.485
1973	74.06	35.68	18.54	6.567	4.413	1.096
1974	74.06	34.97	18.08	6.582	4.401	1.09
1975	74.06	34.35	17.55	6.298	4.204	1.041
1976	89.35	44.91	23.65	11.5	7.678	1.897
1977	74.06	35.84	19.9	7.035	4.886	1.231
1978	74.06	33.61	16.99	6.77	4.525	1.122
1979	74.06	35.46	18.38	7.436	5.049	1.251
1980	74.06	35.79	18.63	6.744	4.502	1.112
1981	74.06	36.67	19.38	6.854	4.581	1.168
1982	74.06	37.13	19.78	8.856	5.933	1.468
1983	129	64.61	28.41	11.29	7.568	1.876
1984	236	120	44.22	15.67	10.48	2.589
1985	74.06	34.81	17.84	6.783	4.528	1.123
1986	74.06	36.27	18.99	7.273	5.134	1.27
1987	74.06	35.86	18.66	6.607	4.41	1.091
1988	74.06	37.13	19.68	6.981	4.66	1.154
1989	74.06	35.32	18.25	6.461	4.312	1.112
1990	74.06	33.74	17.08	6.045	4.037	1.005

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		236	120	44.22	15.67	10.48 2.589
0.0645161290322581		149	77.47	28.82	13.22	8.831 2.18
0.0967741935483871		129	64.61	28.41	12.73	8.509 2.106
0.129032258064516		89.35	44.91	23.65	11.5	7.678 1.897

0.161290322580645	75.44	37.77	20	11.29	7.568	1.876
0.193548387096774	74.06	37.17	19.9	8.856	5.933	1.485
0.225806451612903	74.06	37.13	19.85	8.816	5.886	1.468
0.258064516129032	74.06	37.13	19.8	8.563	5.726	1.428
0.290322580645161	74.06	36.91	19.78	8.505	5.725	1.417
0.32258064516129	74.06	36.84	19.68	8.445	5.679	1.406
0.354838709677419	74.06	36.67	19.62	8.256	5.551	1.383
0.387096774193548	74.06	36.29	19.53	8.218	5.53	1.369
0.419354838709677	74.06	36.27	19.52	8.199	5.474	1.366
0.451612903225806	74.06	36.09	19.38	7.662	5.134	1.32
0.483870967741936	74.06	35.86	19.25	7.436	5.114	1.27
0.516129032258065	74.06	35.84	19.07	7.273	5.049	1.251
0.548387096774194	74.06	35.79	18.99	7.273	5.029	1.247
0.580645161290323	74.06	35.68	18.66	7.035	4.886	1.231
0.612903225806452	74.06	35.68	18.63	6.981	4.66	1.168
0.645161290322581	74.06	35.54	18.54	6.854	4.581	1.154
0.67741935483871	74.06	35.46	18.51	6.783	4.528	1.123
0.709677419354839	74.06	35.32	18.38	6.77	4.525	1.122
0.741935483870968	74.06	35.03	18.25	6.744	4.502	1.112
0.774193548387097	74.06	34.97	18.08	6.607	4.413	1.112
0.806451612903226	74.06	34.81	17.84	6.582	4.41	1.096
0.838709677419355	74.06	34.61	17.74	6.567	4.401	1.091
0.870967741935484	74.06	34.57	17.7	6.461	4.312	1.09
0.903225806451613	74.06	34.35	17.55	6.298	4.204	1.041
0.935483870967742	74.06	33.74	17.08	6.259	4.178	1.034
0.967741935483871	74.06	33.61	16.99	6.045	4.037	1.005

0.1 125.035 62.64 27.934 12.607 8.4259 2.0851

Average of yearly averages: 1.38123333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLturfScenario_2

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable	Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol		
Vapor Pressure	vapr	5.72e-7	torr		
Solubility	sol	0.8	mg/L		
Kd	Kd		mg/L		
Koc	Koc	554	mg/L		
Photolysis half-life	kdp	0.5	days	Half-life	
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife	
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife	
Aerobic Soil Metabolism	asm	33	days	Halfife	
Hydrolysis:	pH 7	0	days	Half-life	
Method: CAM	2	integer	See PRZM manual		
Incorporation Depth:	DEPI	0	cm		
Application Rate: TAPP		12.7	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction		
Spray Drift	DRFT	.16	fraction of application rate applied to pond		
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm		

Interval 1	interval 7	days	Set to 0 or delete line for single app.
app. rate 1	apprate 8.2	kg/ha	
Interval 2	interval 7	days	Set to 0 or delete line for single app.
app. rate 2	apprate 8.2	kg/ha	
Record 17:	FILTRA		
	IPSCND1		
	UPTKF		
Record 18:	PLVKRT		
	PLDKRT		
	FEXTRC 0.5		
Flag for Index Res. Run	IR	Reservoir	
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)

PA Turf Scenario 1

stored as ChlorothalonilPAturfScenario_1.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	69.19	33.88	23.09	10.34	8.824	2.269
1962	48.53	28.4	19.41	9.15	6.26	1.598
1963	50	30.53	21	9.382	6.285	1.589
1964	48.17	28.85	19.92	9.351	6.317	1.584
1965	47.52	26.84	18.22	8.396	5.665	1.42
1966	115	65.58	20.75	9.085	6.065	2.555
1967	54.28	36.09	24.9	12.57	8.997	2.266
1968	127	92.36	39.27	16.16	10.79	2.837
1969	154	73.99	21.56	10.26	10.93	2.736
1970	48.1	27.77	18.97	9.783	6.592	1.65
1971	50.91	31.76	21.86	9.622	8.213	2.095
1972	936	554	153	63.26	42.31	10.53
1973	101	71.34	33.91	14.04	9.382	2.516
1974	49.15	29.35	20.18	9.44	6.749	1.738
1975	59.02	31.11	20.74	12.12	8.113	2.067
1976	51.57	34.42	24.1	10.44	7.274	1.836
1977	48.36	28.22	19.48	9.1	6.077	1.522
1978	50.14	30.74	21.21	12.26	8.199	2.041
1979	50.96	33.12	22.04	10.84	7.247	1.857
1980	54.85	32.28	21.15	9.658	6.45	1.663
1981	49.85	30.33	20.87	9.42	6.535	1.632
1982	159	101	56.85	24.93	16.67	4.152
1983	73.98	47.78	27.68	12	8.016	2.013
1984	142	90.23	37.83	17.1	11.43	2.843
1985	51.59	31.93	23.49	10.89	7.278	1.858
1986	49.01	29.11	19.99	9.075	7.136	1.791
1987	66.76	33.65	20.09	11.8	7.887	2.034
1988	49.69	30.1	20.76	9.351	6.771	1.691
1989	51.32	32.27	23.21	12.22	8.466	2.134
1990	208	132	46.89	19.17	12.93	3.264

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
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0.032258064516129	936	554	153	63.26	42.31	10.53
0.0645161290322581	208	132	56.85	24.93	16.67	4.152
0.0967741935483871	159	101	46.89	19.17	12.93	3.264
0.129032258064516	154	92.36	39.27	17.1	11.43	2.843
0.161290322580645	142	90.23	37.83	16.16	10.93	2.837
0.193548387096774	127	73.99	33.91	14.04	10.79	2.736
0.225806451612903	115	71.34	27.68	12.57	9.382	2.555
0.258064516129032	101	65.58	24.9	12.26	8.997	2.516
0.290322580645161	73.98	47.78	24.1	12.22	8.824	2.269
0.32258064516129	69.19	36.09	23.49	12.12	8.466	2.266
0.354838709677419	66.76	34.42	23.21	12	8.213	2.134
0.387096774193548	59.02	33.88	23.09	11.8	8.199	2.095
0.419354838709677	54.85	33.65	22.04	10.89	8.113	2.067
0.451612903225806	54.28	33.12	21.86	10.84	8.016	2.041
0.483870967741936	51.59	32.28	21.56	10.44	7.887	2.034
0.516129032258065	51.57	32.27	21.21	10.34	7.278	2.013
0.548387096774194	51.32	31.93	21.15	10.26	7.274	1.858
0.580645161290323	50.96	31.76	21	9.783	7.247	1.857
0.612903225806452	50.91	31.11	20.87	9.658	7.136	1.836
0.645161290322581	50.14	30.74	20.76	9.622	6.771	1.791
0.67741935483871	50	30.53	20.75	9.44	6.749	1.738
0.709677419354839	49.85	30.33	20.74	9.42	6.592	1.691
0.741935483870968	49.69	30.1	20.18	9.382	6.535	1.663
0.774193548387097	49.15	29.35	20.09	9.351	6.45	1.65
0.806451612903226	49.01	29.11	19.99	9.351	6.317	1.632
0.838709677419355	48.53	28.85	19.92	9.15	6.285	1.598
0.870967741935484	48.36	28.4	19.48	9.1	6.26	1.589
0.903225806451613	48.17	28.22	19.41	9.085	6.077	1.584
0.935483870967742	48.1	27.77	18.97	9.075	6.065	1.522
0.967741935483871	47.52	26.84	18.22	8.396	5.665	1.42

0.1 158.5 100.136 46.128 18.963 12.78 3.2219

Average of yearly averages: 2.3927

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAturfScenario_1

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	

Application Rate: TAPP 7.3 kg/ha
 Application Efficiency: APPEFF0.95 fraction
 Spray Drift DRFT .16 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 7.3 kg/ha
 Interval 2 interval 7 days Set to 0 or delete line for single app.
 app. rate 2 apprate 7.3 kg/ha
 Interval 3 interval 7 days Set to 0 or delete line for single app.
 app. rate 3 apprate 7.3 kg/ha
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Turf Scenario 2

stored as ChlorothalonilPAturfScenario_2.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	74.06	47.76	30.95	11.21	9.245	2.366
1962	74.06	43.56	25.9	9.599	6.538	1.66
1963	74.06	45.55	28.12	10.11	6.763	1.7
1964	74.06	43.02	25.36	9.751	6.583	1.649
1965	74.06	41.97	24.26	8.735	5.883	1.472
1966	104	59.26	27.89	9.968	6.654	2.599
1967	74.07	49.96	33.7	13.74	9.691	2.434
1968	164	122	53.1	19.5	13.02	3.328
1969	131	63.02	26.16	9.392	10.55	2.639
1970	74.06	42.91	25.26	10.01	6.736	1.683
1971	74.06	46.63	29.36	10.53	8.316	2.103
1972	734	434	120	52.12	34.84	8.658
1973	127	91.48	45.84	16.65	11.12	2.896
1974	74.06	44.44	26.92	9.907	6.979	1.784
1975	74.06	43.9	26.33	12.12	8.106	2.053
1976	74.06	51.54	32.59	11.77	8.039	2.009
1977	74.06	43.3	25.78	9.347	6.242	1.562
1978	74.34	45.88	28.4	12.41	8.297	2.064
1979	74.06	45.16	29.41	11.27	7.529	1.91
1980	74.06	43.56	28.65	10.35	6.913	1.767
1981	74.06	45.36	27.92	10.08	6.948	1.733
1982	206	132	65.86	28.5	19.06	4.745
1983	94.39	60.96	37.3	13.48	9.007	2.258
1984	177	113	49.28	19.26	12.88	3.202
1985	74.06	52.02	31.65	11.57	7.734	1.959
1986	74.06	44.23	26.7	9.608	7.355	1.843
1987	74.06	44.47	26.89	12.05	8.056	2.063

1988	74.06	45.22	27.77	9.995	7.082	1.765
1989	80.07	52.82	31.7	13	8.933	2.244
1990	262	166	60.47	22.67	15.23	3.822

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		734	434	120	52.12	34.84
0.0645161290322581		262	166	65.86	28.5	19.06
0.0967741935483871		206	132	60.47	22.67	15.23
0.129032258064516		177	122	53.1	19.5	13.02
0.161290322580645		164	113	49.28	19.26	12.88
0.193548387096774		131	91.48	45.84	16.65	11.12
0.225806451612903		127	63.02	37.3	13.74	10.55
0.258064516129032		104	60.96	33.7	13.48	9.691
0.290322580645161		94.39	59.26	32.59	13	9.245
0.32258064516129		80.07	52.82	31.7	12.41	9.007
0.354838709677419		74.34	52.02	31.65	12.12	8.933
0.387096774193548		74.07	51.54	30.95	12.05	8.316
0.419354838709677		74.06	49.96	29.41	11.77	8.297
0.451612903225806		74.06	47.76	29.36	11.57	8.106
0.483870967741936		74.06	46.63	28.65	11.27	8.056
0.516129032258065		74.06	45.88	28.4	11.21	8.039
0.548387096774194		74.06	45.55	28.12	10.53	7.734
0.580645161290323		74.06	45.36	27.92	10.35	7.529
0.612903225806452		74.06	45.22	27.89	10.11	7.355
0.645161290322581		74.06	45.16	27.77	10.08	7.082
0.67741935483871		74.06	44.47	26.92	10.01	6.979
0.709677419354839		74.06	44.44	26.89	9.995	6.948
0.741935483870968		74.06	44.23	26.7	9.968	6.913
0.774193548387097		74.06	43.9	26.33	9.907	6.763
0.806451612903226		74.06	43.56	26.16	9.751	6.736
0.838709677419355		74.06	43.56	25.9	9.608	6.654
0.870967741935484		74.06	43.3	25.78	9.599	6.583
0.903225806451613		74.06	43.02	25.36	9.392	6.538
0.935483870967742		74.06	42.91	25.26	9.347	6.242
0.967741935483871		74.06	41.97	24.26	8.735	5.883
						1.472

0.1 203.1 131 59.733 22.353 15.009 3.7726

Average of yearly averages: 2.4656666666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAturfScenario_2

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable	Name	Value	Units	Comments
Molecular weight	mwt		265.9	g/mol	
Henry's Law Const.	henry		2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr		5.72e-7	torr	
Solubility	sol		0.8	mg/L	
Kd	Kd		mg/L		
Koc	Koc	554	mg/L		
Photolysis half-life	kdp	0.5	days	Half-life	

Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	12.7	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	8.2	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	8.2	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

Chlorothalonil on Sod Farms

FL Sod Farm Scenario 1

stored as ChlorothalonilFLturfSFScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	44.97	22.38	9.99	4.131	2.789	0.6948
1962	44.31	20.69	9.02	4.152	2.781	0.6885
1963	44.43	25.11	10.26	4.22	2.82	0.6979
1964	44.61	21.5	9.476	4.279	2.901	0.7232
1965	45.08	22.63	10.14	4.298	2.87	0.7104
1966	44.79	21.95	9.742	6.1	4.078	1.009
1967	44.57	21.39	10.15	3.652	2.52	0.6247
1968	60.23	31.39	12.77	6.167	4.118	1.016
1969	45.5	22.18	10.16	3.879	2.589	0.6612
1970	44.32	20.71	9.031	3.171	2.116	0.5235
1971	45.09	22.58	10.19	4.12	2.751	0.6857
1972	44.9	22.11	9.884	4.41	2.944	0.7417
1973	44.61	21.5	9.477	3.329	2.235	0.5548
1974	44.41	20.97	9.204	3.311	2.213	0.5482
1975	44.25	20.53	8.927	3.174	2.119	0.5245
1976	51.36	25.82	11.89	4.997	3.335	0.8233
1977	44.66	21.62	10.45	3.673	2.522	0.6319
1978	44.07	20.01	8.649	3.419	2.285	0.5667
1979	44.55	21.34	9.386	3.743	2.54	0.6289
1980	44.65	21.58	9.526	3.401	2.27	0.5606

1981	44.91	22.24	10	3.513	2.347	0.5941
1982	45.07	22.6	10.18	4.37	2.926	0.7239
1983	45.1	22.69	14.47	5.703	3.821	0.9471
1984	171	86.51	27.17	9.579	6.401	1.58
1985	44.37	20.86	9.113	3.387	2.261	0.5606
1986	44.79	21.94	9.73	3.685	2.597	0.6424
1987	44.67	21.63	9.553	3.355	2.239	0.554
1988	45.06	22.6	10.11	3.556	2.374	0.5874
1989	44.51	21.23	9.325	3.275	2.186	0.5629
1990	44.1	20.1	8.686	3.05	2.036	0.5069

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	171	86.51	27.17	9.579	6.401	1.58
0.0645161290322581	60.23	31.39	14.47	6.167	4.118	1.016
0.0967741935483871	51.36	25.82	12.77	6.1	4.078	1.009
0.129032258064516	45.5	25.11	11.89	5.703	3.821	0.9471
0.161290322580645	45.1	22.69	10.45	4.997	3.335	0.8233
0.193548387096774	45.09	22.63	10.26	4.41	2.944	0.7417
0.225806451612903	45.08	22.6	10.19	4.37	2.926	0.7239
0.258064516129032	45.07	22.6	10.18	4.298	2.901	0.7232
0.290322580645161	45.06	22.58	10.16	4.279	2.87	0.7104
0.32258064516129	44.97	22.38	10.15	4.22	2.82	0.6979
0.354838709677419	44.91	22.24	10.14	4.152	2.789	0.6948
0.387096774193548	44.9	22.18	10.11	4.131	2.781	0.6885
0.419354838709677	44.79	22.11	10	4.12	2.751	0.6857
0.451612903225806	44.79	21.95	9.99	3.879	2.597	0.6612
0.483870967741936	44.67	21.94	9.884	3.743	2.589	0.6424
0.516129032258065	44.66	21.63	9.742	3.685	2.54	0.6319
0.548387096774194	44.65	21.62	9.73	3.673	2.522	0.6289
0.580645161290323	44.61	21.58	9.553	3.652	2.52	0.6247
0.612903225806452	44.61	21.5	9.526	3.556	2.374	0.5941
0.645161290322581	44.57	21.5	9.477	3.513	2.347	0.5874
0.67741935483871	44.55	21.39	9.476	3.419	2.285	0.5667
0.709677419354839	44.51	21.34	9.386	3.401	2.27	0.5629
0.741935483870968	44.43	21.23	9.325	3.387	2.261	0.5606
0.774193548387097	44.41	20.97	9.204	3.355	2.239	0.5606
0.806451612903226	44.37	20.86	9.113	3.329	2.235	0.5548
0.838709677419355	44.32	20.71	9.031	3.311	2.213	0.554
0.870967741935484	44.31	20.69	9.02	3.275	2.186	0.5482
0.903225806451613	44.25	20.53	8.927	3.174	2.119	0.5245
0.935483870967742	44.1	20.1	8.686	3.171	2.116	0.5235
0.967741935483871	44.07	20.01	8.649	3.05	2.036	0.5069

0.1 50.774 25.749 12.682 6.0603 4.0523 1.00281

Average of yearly averages: 0.695826666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLturfSFScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
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Molecular weight mwt 265.9 g/mol
 Henry's Law Const. henry 2.6e-7 atm-m^3/mol
 Vapor Pressure vapr 5.72e-7 torr
 Solubility sol 0.8 mg/L
 Kd Kd mg/L
 Koc Koc 554 mg/L
 Photolysis half-life kdp 0.5 days Half-life
 Aerobic Aquatic Metabolism kbacw 1.5 days Halfife
 Anaerobic Aquatic Metabolism kbacs 151 days Halfife
 Aerobic Soil Metabolism asm 33 days Halfife
 Hydrolysis: pH 7 0 days Half-life
 Method: CAM 2 integer See PRZM manual
 Incorporation Depth: DEPI 0 cm
 Application Rate: TAPP 7.3 kg/ha
 Application Efficiency: APPEFF 0.95 fraction
 Spray Drift DRFT .16 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 7.3 kg/ha
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

FL Sod Farm Scenario 2

stored as ChlorothalonilFLturfSFSceario_2.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wedday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	74.06	36.84	10.01	4.08	2.752	0.685
1962	74.06	34.57	9.029	4.144	2.775	0.687
1963	74.06	35.03	10.27	4.222	2.821	0.6982
1964	74.06	35.68	9.491	4.283	2.903	0.7237
1965	74.06	37.17	10.16	4.301	2.872	0.7108
1966	74.06	36.28	9.757	5.914	3.953	0.9783
1967	74.06	35.53	10.16	3.651	2.518	0.624
1968	74.06	35.89	12.52	6.106	4.077	1.006
1969	74.06	36.09	10.38	3.903	2.605	0.6605
1970	74.06	34.61	9.041	3.173	2.118	0.5237
1971	75.44	37.77	10.28	4.033	2.692	0.6698
1972	74.06	36.91	9.952	4.17	2.784	0.6969
1973	74.06	35.68	9.49	3.331	2.236	0.5551
1974	74.06	34.97	9.21	3.296	2.202	0.5452
1975	74.06	34.35	8.936	3.171	2.117	0.5238
1976	89.35	44.91	12.55	5.027	3.356	0.8281
1977	74.06	35.84	10.47	3.677	2.525	0.6324
1978	74.06	33.61	8.657	3.421	2.286	0.5669

1979	74.06	35.46	9.398	3.745	2.541	0.6292
1980	74.06	35.79	9.539	3.403	2.271	0.5609
1981	74.06	36.67	10.02	3.518	2.351	0.5948
1982	74.06	37.13	10.2	4.317	2.89	0.7147
1983	74.06	37.25	14.49	5.706	3.824	0.9476
1984	151	76.48	27.19	9.582	6.403	1.581
1985	74.06	34.81	9.125	3.371	2.25	0.5578
1986	74.06	36.27	9.747	3.659	2.563	0.6339
1987	74.06	35.86	9.568	3.358	2.241	0.5544
1988	74.06	37.13	10.14	3.561	2.377	0.5881
1989	74.06	35.32	9.337	3.277	2.187	0.5622
1990	74.06	33.74	8.693	3.051	2.037	0.5068

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly		
0.032258064516129		151	76.48	27.19	9.582	6.403	1.581	
0.0645161290322581		89.35	44.91	14.49	6.106	4.077	1.006	
0.0967741935483871		75.44	37.77	12.55	5.914	3.953	0.9783	
0.129032258064516		74.06	37.25	12.52	5.706	3.824	0.9476	
0.161290322580645		74.06	37.17	10.47	5.027	3.356	0.8281	
0.193548387096774		74.06	37.13	10.38	4.317	2.903	0.7237	
0.225806451612903		74.06	37.13	10.28	4.301	2.89	0.7147	
0.258064516129032		74.06	36.91	10.27	4.283	2.872	0.7108	
0.290322580645161		74.06	36.84	10.2	4.222	2.821	0.6982	
0.32258064516129		74.06	36.67	10.16	4.17	2.784	0.6969	
0.354838709677419		74.06	36.28	10.16	4.144	2.775	0.687	
0.387096774193548		74.06	36.27	10.14	4.08	2.752	0.685	
0.419354838709677		74.06	36.09	10.02	4.033	2.692	0.6698	
0.451612903225806		74.06	35.89	10.01	3.903	2.605	0.6605	
0.483870967741936		74.06	35.86	9.952	3.745	2.563	0.6339	
0.516129032258065		74.06	35.84	9.757	3.677	2.541	0.6324	
0.548387096774194		74.06	35.79	9.747	3.659	2.525	0.6292	
0.580645161290323		74.06	35.68	9.568	3.651	2.518	0.624	
0.612903225806452		74.06	35.68	9.539	3.561	2.377	0.5948	
0.645161290322581		74.06	35.53	9.491	3.518	2.351	0.5881	
0.67741935483871		74.06	35.46	9.49	3.421	2.286	0.5669	
0.709677419354839		74.06	35.32	9.398	3.403	2.271	0.5622	
0.741935483870968		74.06	35.03	9.337	3.371	2.25	0.5609	
0.774193548387097		74.06	34.97	9.21	3.358	2.241	0.5578	
0.806451612903226		74.06	34.81	9.125	3.331	2.236	0.5551	
0.838709677419355		74.06	34.61	9.041	3.296	2.202	0.5544	
0.870967741935484		74.06	34.57	9.029	3.277	2.187	0.5452	
0.903225806451613		74.06	34.35	8.936	3.173	2.118	0.5238	
0.935483870967742		74.06	33.74	8.693	3.171	2.117	0.5237	
0.967741935483871		74.06	33.61	8.657	3.051	2.037	0.5068	

0.1 75.302 37.718 12.547 5.8932 3.9401 0.97523

Average of yearly averages: 0.69156

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLturfSFSceario_2

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil
 Description Variable Name Value Units Comments
 Molecular weight mwt 265.9 g/mol
 Henry's Law Const. henry 2.6e-7 atm-m^3/mol
 Vapor Pressure vapr 5.72e-7 torr
 Solubility sol 0.8 mg/L
 Kd Kd mg/L
 Koc Koc 554 mg/L
 Photolysis half-life kdp 0.5 days Half-life
 Aerobic Aquatic Metabolism kbacw 1.5 days Half-life
 Anaerobic Aquatic Metabolism kbacs 151 days Half-life
 Aerobic Soil Metabolism asm 33 days Half-life
 Hydrolysis: pH 7 0 days Half-life
 Method: CAM 2 integer See PRZM manual
 Incorporation Depth: DEPI 0 cm
 Application Rate: TAPP 12.7 kg/ha
 Application Efficiency: APPEFF 0.95 fraction
 Spray Drift DRFT .16 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 1.9 kg/ha
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Sod Farm Scenario 1

stored as ChlorothalonilPAturfSFSceario_1.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	50.46	32.55	16.49	5.853	4.738	1.209
1962	47.85	28.15	13.55	4.92	3.343	0.8468
1963	49.01	30.15	14.86	5.251	3.513	0.8817
1964	47.57	27.64	13.23	4.987	3.366	0.8429
1965	47.04	26.67	12.61	4.459	3.001	0.7502
1966	48.97	30.08	14.8	5.218	3.483	1.302
1967	52.11	35.16	18.26	7.28	5.114	1.283
1968	106	69.34	32.19	11.74	7.846	1.978
1969	64.93	31.22	13.72	4.842	5.351	1.34
1970	47.51	27.54	13.16	5.095	3.427	0.8558
1971	49.7	31.3	15.62	5.519	4.293	1.084
1972	362	214	59.14	25.88	17.3	4.298
1973	72.89	48.09	27.14	9.79	6.54	1.672
1974	48.35	29.02	14.12	5.078	3.541	0.9011
1975	48.04	28.48	13.78	6.102	4.081	1.031
1976	51.04	32.39	17.36	6.176	4.203	1.049

1977	47.72	27.91	13.41	4.751	3.173	0.7937
1978	49.13	30.34	15.01	6.244	4.173	1.037
1979	48.77	33.12	15.72	5.78	3.861	0.9711
1980	54.84	32.27	15.07	5.335	3.563	0.908
1981	48.89	29.95	14.73	5.225	3.59	0.895
1982	114	69.8	36.59	15.1	10.09	2.513
1983	73.98	47.77	21.02	7.473	4.992	1.251
1984	67.05	42.73	25.64	9.805	6.553	1.628
1985	51.59	31.93	16.73	5.95	3.976	1.003
1986	48.32	28.86	14.01	4.949	3.752	0.9396
1987	48.42	29.09	14.16	6.147	4.108	1.05
1988	48.87	29.8	14.64	5.173	3.613	0.8994
1989	50.96	32.27	16.91	6.702	4.592	1.152
1990	106	67.08	30.51	11.3	7.591	1.902

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly	
0.032258064516129		362	214	59.14	25.88	17.3	4.298
0.0645161290322581		114	69.8	36.59	15.1	10.09	2.513
0.0967741935483871		106	69.34	32.19	11.74	7.846	1.978
0.129032258064516		106	67.08	30.51	11.3	7.591	1.902
0.161290322580645		73.98	48.09	27.14	9.805	6.553	1.672
0.193548387096774		72.89	47.77	25.64	9.79	6.54	1.628
0.225806451612903		67.05	42.73	21.02	7.473	5.351	1.34
0.258064516129032		64.93	35.16	18.26	7.28	5.114	1.302
0.290322580645161		54.84	33.12	17.36	6.702	4.992	1.283
0.32258064516129		52.11	32.55	16.91	6.244	4.738	1.251
0.354838709677419		51.59	32.39	16.73	6.176	4.592	1.209
0.387096774193548		51.04	32.27	16.49	6.147	4.293	1.152
0.419354838709677		50.96	32.27	15.72	6.102	4.203	1.084
0.451612903225806		50.46	31.93	15.62	5.95	4.173	1.05
0.483870967741936		49.7	31.3	15.07	5.853	4.108	1.049
0.516129032258065		49.13	31.22	15.01	5.78	4.081	1.037
0.548387096774194		49.01	30.34	14.86	5.519	3.976	1.031
0.580645161290323		48.97	30.15	14.8	5.335	3.861	1.003
0.612903225806452		48.89	30.08	14.73	5.251	3.752	0.9711
0.645161290322581		48.87	29.95	14.64	5.225	3.613	0.9396
0.67741935483871		48.77	29.8	14.16	5.218	3.59	0.908
0.709677419354839		48.42	29.09	14.12	5.173	3.563	0.9011
0.741935483870968		48.35	29.02	14.01	5.095	3.541	0.8994
0.774193548387097		48.32	28.86	13.78	5.078	3.513	0.895
0.806451612903226		48.04	28.48	13.72	4.987	3.483	0.8817
0.838709677419355		47.85	28.15	13.55	4.949	3.427	0.8558
0.870967741935484		47.72	27.91	13.41	4.92	3.366	0.8468
0.903225806451613		47.57	27.64	13.23	4.842	3.343	0.8429
0.935483870967742		47.51	27.54	13.16	4.751	3.173	0.7937
0.967741935483871		47.04	26.67	12.61	4.459	3.001	0.7502

0.1 106 69.114 32.022 11.696 7.8205 1.9704

Average of yearly averages: 1.275576666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAturfSFSceario_1

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	7.3	kg/ha		
Application Efficiency:	APPEFF	0.95	fraction	
Spray Drift	DRFT	.16	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Record 17:	FILTRA			

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Sod Farm Scenario 2

stored as ChlorothalonilPAturfSFSceario_2.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wedday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	74.06	36.84	10.01	5.066	3.452	0.8665
1962	74.06	34.57	9.029	5.443	3.673	0.9109
1963	74.06	35.03	12.48	5.73	3.844	0.9527
1964	74.06	35.68	9.491	5.753	3.967	0.9976
1965	74.06	37.17	10.16	6.627	4.429	1.098
1966	74.06	36.29	9.761	8.003	5.373	1.331
1967	74.06	35.53	11.4	4.283	3.09	0.7672
1968	92.16	54.36	17.78	9.488	6.339	1.566
1969	74.06	36.09	12.78	5.063	3.384	0.8694
1970	74.06	34.61	9.151	3.226	2.153	0.5333
1971	94.23	47.19	12.53	5.578	3.728	0.9343
1972	74.08	44.36	11.95	5.988	4	1.009
1973	74.06	35.68	9.49	3.331	2.299	0.5758
1974	74.06	34.97	9.523	3.764	2.527	0.6265

1975	74.06	34.35	8.936	3.483	2.326	0.5759
1976	134	67.38	21.21	8.84	5.907	1.461
1977	74.06	35.84	13.08	4.605	3.218	0.8172
1978	74.06	33.61	8.953	4.852	3.265	0.8133
1979	74.06	35.46	9.399	4.564	3.214	0.7981
1980	74.06	35.79	9.566	3.759	2.525	0.6257
1981	74.06	36.67	10.67	3.75	2.54	0.6634
1982	74.06	37.13	12.15	5.902	3.993	0.9889
1983	74.06	37.25	17.75	7.918	5.332	1.327
1984	210	107	34.38	12.21	8.202	2.033
1985	74.06	34.81	9.294	3.907	2.609	0.6495
1986	74.06	36.27	9.747	4.234	3.139	0.7769
1987	74.06	35.86	9.568	3.399	2.268	0.5629
1988	74.06	37.13	10.14	3.837	2.561	0.6424
1989	74.06	35.32	9.337	3.277	2.187	0.5693
1990	74.06	33.74	8.693	3.075	2.076	0.5207

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		210	107	34.38	12.21	8.202
0.0645161290322581		134	67.38	21.21	9.488	6.339
0.0967741935483871		94.23	54.36	17.78	8.84	5.907
0.129032258064516		92.16	47.19	17.75	8.003	5.373
0.161290322580645		74.08	44.36	13.08	7.918	5.332
0.193548387096774		74.06	37.25	12.78	6.627	4.429
0.225806451612903		74.06	37.17	12.53	5.988	4
0.258064516129032		74.06	37.13	12.48	5.902	3.993
0.290322580645161		74.06	37.13	12.15	5.753	3.967
0.32258064516129		74.06	36.84	11.95	5.73	3.844
0.354838709677419		74.06	36.67	11.4	5.578	3.728
0.387096774193548		74.06	36.29	10.67	5.443	3.673
0.419354838709677		74.06	36.27	10.16	5.066	3.452
0.451612903225806		74.06	36.09	10.14	5.063	3.384
0.483870967741936		74.06	35.86	10.01	4.852	3.265
0.516129032258065		74.06	35.84	9.761	4.605	3.218
0.548387096774194		74.06	35.79	9.747	4.564	3.214
0.580645161290323		74.06	35.68	9.568	4.283	3.139
0.612903225806452		74.06	35.68	9.566	4.234	3.09
0.645161290322581		74.06	35.53	9.523	3.907	2.609
0.67741935483871		74.06	35.46	9.491	3.837	2.561
0.709677419354839		74.06	35.32	9.49	3.764	2.54
0.741935483870968		74.06	35.03	9.399	3.759	2.527
0.774193548387097		74.06	34.97	9.337	3.75	2.525
0.806451612903226		74.06	34.81	9.294	3.483	2.326
0.838709677419355		74.06	34.61	9.151	3.399	2.299
0.870967741935484		74.06	34.57	9.029	3.331	2.268
0.903225806451613		74.06	34.35	8.953	3.277	2.187
0.935483870967742		74.06	33.74	8.936	3.226	2.153
0.967741935483871		74.06	33.61	8.693	3.075	2.076

0.1 94.023 53.643 17.777 8.7563 5.8536 1.448

Average of yearly averages: 0.8954466666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAturfSFSceario_2

Metfile: w12834.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
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Molecular weight mwt	265.9	g/mol		
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Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
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Vapor Pressure	vapr	5.72e-7	torr	
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Solubility	sol	0.8	mg/L	
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Kd	Kd		mg/L	
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Koc	Koc	554	mg/L	
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Photolysis half-life	kdp	0.5	days	Half-life
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Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
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Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
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Aerobic Soil Metabolism	asm	33	days	Halfife
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Hydrolysis:	pH 7	0	days	Half-life
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Method: CAM	2	integer	See PRZM manual	
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Incorporation Depth:	DEPI	0	cm	
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Application Rate: TAPP	12.7	kg/ha		
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Application Efficiency:	APPEFF0.95	fraction		
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Spray Drift	DRFT	.16	fraction of application rate applied to pond	
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Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
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Interval 1	interval	7	days	Set to 0 or delete line for single app.
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app. rate 1	apprate	1.9	kg/ha	
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Record 17:	FILTRA			
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IPSCND1				
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UPTKF				
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Record 18:	PLVKRT			
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PLDKRT				
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FEXTRC	0.5			
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Flag for Index Res. Run	IR	Reservoir		
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Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	
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Chlorothalonil on Golf Courses

FL Golf Course Scenario 1

FL Fairways Scenario 1

stored as ChlorothalonilFLfairwaysScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	38.68	18.03	5.874	4.126	2.827	0.7113
1962	44.32	20.04	7.763	4.644	3.121	0.7735
1963	58.31	34.55	8.439	5.792	3.886	0.9632
1964	61.41	26.08	5.817	4.548	3.132	0.7892
1965	20.34	11.25	6.915	4.288	2.864	0.7094
1966	89.62	41.27	15.78	10.06	6.731	1.667
1967	21.55	11.93	7.102	3.153	2.366	0.5894
1968	129	76.19	21.6	8.709	5.818	1.437
1969	45.16	19.06	8.211	3.606	2.408	0.6667
1970	17.76	8.286	5.312	2.428	1.621	0.4014
1971	40.58	18.45	5.997	4.169	2.784	0.7038
1972	72.67	31.79	8.642	5.135	3.43	0.8892
1973	17.89	8.599	5.566	2.548	1.735	0.4351
1974	17.95	8.397	5.483	2.767	1.857	0.4628
1975	17.73	8.214	5.282	2.56	1.71	0.4245
1976	189	87.99	24.94	10.08	6.731	1.668
1977	20.28	9.771	6.522	2.839	2.185	0.5765
1978	39.8	16.64	6.946	3.209	2.15	0.5358
1979	29.89	12.46	5.526	3.546	2.461	0.6106
1980	17.9	8.633	5.596	2.739	1.829	0.4538
1981	18.43	9.073	5.866	2.609	1.751	0.4872
1982	84.64	37.48	9.861	5.602	3.776	0.9349
1983	79.18	39.71	16.61	6.674	4.498	1.118
1984	159	80.29	23.67	8.994	6.029	1.493
1985	18.93	8.345	5.35	3.03	2.023	0.5035
1986	18.58	8.776	5.697	3.195	2.442	0.6045
1987	17.91	8.653	5.596	2.548	1.701	0.4212
1988	18.09	9.04	5.897	2.677	1.787	0.4459
1989	17.84	8.493	5.478	2.506	1.673	0.4637
1990	17.67	8.038	5.139	2.378	1.59	0.4017

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	189	87.99	24.94	10.08	6.731	1.668
0.0645161290322581	159	80.29	23.67	10.06	6.731	1.667
0.0967741935483871	129	76.19	21.6	8.994	6.029	1.493
0.129032258064516	89.62	41.27	16.61	8.709	5.818	1.437
0.161290322580645	84.64	39.71	15.78	6.674	4.498	1.118
0.193548387096774	79.18	37.48	9.861	5.792	3.886	0.9632
0.225806451612903	72.67	34.55	8.642	5.602	3.776	0.9349
0.258064516129032	61.41	31.79	8.439	5.135	3.43	0.8892

0.290322580645161	58.31	26.08	8.211	4.644	3.132	0.7892
0.32258064516129	45.16	20.04	7.763	4.548	3.121	0.7735
0.354838709677419	44.32	19.06	7.102	4.288	2.864	0.7113
0.387096774193548	40.58	18.45	6.946	4.169	2.827	0.7094
0.419354838709677	39.8	18.03	6.915	4.126	2.784	0.7038
0.451612903225806	38.68	16.64	6.522	3.606	2.461	0.6667
0.483870967741936	29.89	12.46	5.997	3.546	2.442	0.6106
0.516129032258065	21.55	11.93	5.897	3.209	2.408	0.6045
0.548387096774194	20.34	11.25	5.874	3.195	2.366	0.5894
0.580645161290323	20.28	9.771	5.866	3.153	2.185	0.5765
0.612903225806452	18.93	9.073	5.817	3.03	2.15	0.5358
0.645161290322581	18.58	9.04	5.697	2.839	2.023	0.5035
0.67741935483871	18.43	8.776	5.596	2.767	1.857	0.4872
0.709677419354839	18.09	8.653	5.596	2.739	1.829	0.4637
0.741935483870968	17.95	8.633	5.566	2.677	1.787	0.4628
0.774193548387097	17.91	8.599	5.526	2.609	1.751	0.4538
0.806451612903226	17.9	8.493	5.483	2.56	1.735	0.4459
0.838709677419355	17.89	8.397	5.478	2.548	1.71	0.4351
0.870967741935484	17.84	8.345	5.35	2.548	1.701	0.4245
0.903225806451613	17.76	8.286	5.312	2.506	1.673	0.4212
0.935483870967742	17.73	8.214	5.282	2.428	1.621	0.4017
0.967741935483871	17.67	8.038	5.139	2.378	1.59	0.4014

0.1 125.062 72.698 21.101 8.9655 6.0079 1.4874

Average of yearly averages: 0.7447266666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLfairwaysScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	7.3	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	7.3	kg/ha	

Interval 3 interval 7 days Set to 0 or delete line for single app.
 app. rate 3 apprate 7.3
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

FL Greens Scenario 1

stored as ChlorothalonilFLgreensScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wedday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	121	56.5	17.18	11.02	8.057	2.154
1962	111	53.74	15.74	11.88	8.465	2.117
1963	199	121	32.95	15.85	11.38	2.842
1964	154	72.67	19.75	10.89	8.742	2.369
1965	40.32	23.61	12.37	8.683	6.329	1.572
1966	446	201	64.17	30.24	21.28	5.293
1967	129	58.55	17.24	10.42	7.947	2.016
1968	144	85.56	24.81	15.23	10.68	2.8
1969	93.9	41.09	9.224	7	5.854	1.943
1970	19.95	9.309	5.968	5.686	4.235	1.051
1971	109	49.57	15.92	9.888	7.094	1.883
1972	169	73.86	20.08	11.16	8.617	2.562
1973	20.1	9.661	6.253	5.937	4.69	1.216
1974	24.5	12.93	7.425	6.702	5.222	1.438
1975	20.8	9.228	6.109	6.162	4.605	1.2
1976	212	98.84	28.36	14.59	10.21	2.742
1977	95.74	39.6	9.937	6.5	6.456	1.846
1978	44.72	18.69	8.306	6.638	5.004	1.318
1979	117	54.78	19.45	10.79	7.797	1.959
1980	32.94	14.56	6.844	6.376	4.684	1.182
1981	37.02	15.68	6.589	5.835	4.377	1.348
1982	142	70.36	19.38	11.06	8.43	2.091
1983	88.95	44.61	18.87	10.7	8.514	2.238
1984	178	90.19	26.59	13.47	9.692	2.451
1985	33.62	14.1	7.949	6.662	4.919	1.275
1986	135	57.37	19.83	11.92	9.186	2.28
1987	20.12	9.721	6.288	5.893	4.384	1.09
1988	20.32	10.15	6.625	6.107	4.542	1.166
1989	46.39	23.43	6.154	5.822	4.323	1.399
1990	19.84	9.03	5.774	5.693	4.27	1.125

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		446	201	64.17	30.24	21.28 5.293
0.0645161290322581		212	121	32.95	15.85	11.38 2.842

0.0967741935483871	199	98.84	28.36	15.23	10.68	2.8
0.129032258064516	178	90.19	26.59	14.59	10.21	2.742
0.161290322580645	169	85.56	24.81	13.47	9.692	2.562
0.193548387096774	154	73.86	20.08	11.92	9.186	2.451
0.225806451612903	144	72.67	19.83	11.88	8.742	2.369
0.258064516129032	142	70.36	19.75	11.16	8.617	2.28
0.290322580645161	135	58.55	19.45	11.06	8.514	2.238
0.32258064516129	129	57.37	19.38	11.02	8.465	2.154
0.354838709677419	121	56.5	18.87	10.89	8.43	2.117
0.387096774193548	117	54.78	17.24	10.79	8.057	2.091
0.419354838709677	111	53.74	17.18	10.7	7.947	2.016
0.451612903225806	109	49.57	15.92	10.42	7.797	1.959
0.483870967741936	95.74	44.61	15.74	9.888	7.094	1.943
0.516129032258065	93.9	41.09	12.37	8.683	6.456	1.883
0.548387096774194	88.95	39.6	9.937	7	6.329	1.846
0.580645161290323	46.39	23.61	9.224	6.702	5.854	1.572
0.612903225806452	44.72	23.43	8.306	6.662	5.222	1.438
0.645161290322581	40.32	18.69	7.949	6.638	5.004	1.399
0.67741935483871	37.02	15.68	7.425	6.5	4.919	1.348
0.709677419354839	33.62	14.56	6.844	6.376	4.69	1.318
0.741935483870968	32.94	14.1	6.625	6.162	4.684	1.275
0.774193548387097	24.5	12.93	6.589	6.107	4.605	1.216
0.806451612903226	20.8	10.15	6.288	5.937	4.542	1.2
0.838709677419355	20.32	9.721	6.253	5.893	4.384	1.182
0.870967741935484	20.12	9.661	6.154	5.835	4.377	1.166
0.903225806451613	20.1	9.309	6.109	5.822	4.323	1.125
0.935483870967742	19.95	9.228	5.968	5.693	4.27	1.09
0.967741935483871	19.84	9.03	5.774	5.686	4.235	1.051

0.1 196.9 97.975 28.183 15.166 10.633 2.7942

Average of yearly averages: 1.9322

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLgreensScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	8.2	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	

Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	8.2	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	8.2	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	8.2	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	8.2	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	8.2	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	8.2	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.
app. rate 7	apprate	8.2	kg/ha	
Interval 8	interval	7	days	Set to 0 or delete line for single app.
app. rate 8	apprate	8.2	kg/ha	
Interval 9	interval	7	days	Set to 0 or delete line for single app.
app. rate 9	apprate	8.2	kg/ha	
Record 17:	FILTRA			

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run	IR	Reservoir	
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)

FL Tees Scenario 1

stored as ChlorothalonilFLteesScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	108	50.29	15.3	8.69	6.093	1.565
1962	98.37	42.42	12.44	9.989	6.777	1.685
1963	177	108	29.22	13.62	9.204	2.287
1964	137	64.74	17.42	9.218	6.557	1.697
1965	35.89	21.02	11.01	7.211	4.82	1.196
1966	397	179	57.12	26.44	17.9	4.444
1967	54.53	24.68	7.132	6.498	5.068	1.277
1968	129	76.19	22.09	13.08	8.763	2.191
1969	56.94	24.92	8.211	5.762	3.988	1.362
1970	17.76	8.287	5.312	4.593	3.068	0.7609
1971	97.08	44.13	14.17	8.306	5.551	1.433
1972	150	65.76	17.88	9.446	6.311	1.824
1973	17.89	8.6	5.566	4.808	3.341	0.8521
1974	21.82	11.52	6.483	5.457	3.716	0.9531
1975	18.52	8.215	5.438	4.99	3.337	0.8454
1976	189	88	25.25	12.51	8.356	2.16
1977	58.34	24.13	6.522	4.943	4.503	1.265

1978	39.8	16.64	7.393	5.436	3.687	0.9469
1979	104	43.45	13.86	8.292	5.873	1.462
1980	29.32	12.96	6.093	5.215	3.483	0.8712
1981	23.62	10.01	5.866	4.727	3.186	0.9567
1982	126	62.68	17.26	9.32	6.511	1.614
1983	79.18	39.71	16.8	9.051	6.528	1.683
1984	159	80.29	23.67	11.48	7.758	1.938
1985	29.93	12.56	7.077	5.443	3.636	0.9236
1986	79.88	34.06	10.49	7.17	5.752	1.426
1987	17.91	8.653	5.597	4.771	3.187	0.7906
1988	18.09	9.04	5.897	4.954	3.309	0.8398
1989	27.62	13.95	5.478	4.717	3.15	0.975
1990	17.67	8.039	5.14	4.592	3.075	0.7891

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		397	179	57.12	26.44	17.9
0.0645161290322581		189	108	29.22	13.62	9.204
0.0967741935483871		177	88	25.25	13.08	8.763
0.129032258064516		159	80.29	23.67	12.51	8.356
0.161290322580645		150	76.19	22.09	11.48	7.758
0.193548387096774		137	65.76	17.88	9.989	6.777
0.225806451612903		129	64.74	17.42	9.446	6.557
0.258064516129032		126	62.68	17.26	9.32	6.528
0.290322580645161		108	50.29	16.8	9.218	6.511
0.32258064516129		104	44.13	15.3	9.051	6.311
0.354838709677419		98.37	43.45	14.17	8.69	6.093
0.387096774193548		97.08	42.42	13.86	8.306	5.873
0.419354838709677		79.88	39.71	12.44	8.292	5.752
0.451612903225806		79.18	34.06	11.01	7.211	5.551
0.483870967741936		58.34	24.92	10.49	7.17	5.068
0.516129032258065		56.94	24.68	8.211	6.498	4.82
0.548387096774194		54.53	24.13	7.393	5.762	4.503
0.580645161290323		39.8	21.02	7.132	5.457	3.988
0.612903225806452		35.89	16.64	7.077	5.443	3.716
0.645161290322581		29.93	13.95	6.522	5.436	3.687
0.67741935483871		29.32	12.96	6.483	5.215	3.636
0.709677419354839		27.62	12.56	6.093	4.99	3.483
0.741935483870968		23.62	11.52	5.897	4.954	3.341
0.774193548387097		21.82	10.01	5.866	4.943	3.337
0.806451612903226		18.52	9.04	5.597	4.808	3.309
0.838709677419355		18.09	8.653	5.566	4.771	3.187
0.870967741935484		17.91	8.6	5.478	4.727	3.186
0.903225806451613		17.89	8.287	5.438	4.717	3.15
0.935483870967742		17.76	8.215	5.312	4.593	3.075
0.967741935483871		17.67	8.039	5.14	4.592	3.068

0.1 175.2 87.229 25.092 13.023 8.7223 2.1879

Average of yearly averages: 1.43378

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilFLteesScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd		mg/L	
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer		See PRZM manual
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	TAPP	7.3	kg/ha	
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064	fraction	of application rate applied to pond
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	7.3	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	7.3	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	7.3	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	7.3	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	7.3	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.
app. rate 7	apprate	7.3	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

FL Golf Course Scenario 2

FL Fairways Scenario 2

stored as ChlorothalonilFLfairwaysScenario_2.out

stored as ChlorothalonilFLfairwaysScenario_2.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	36.49	17	7.81	4.106	2.809	0.706
1962	41.95	18.97	7.097	4.563	3.066	0.7596
1963	33.93	20.34	8.786	4.835	3.237	0.8019
1964	59.79	25.39	7.402	4.596	3.161	0.7955
1965	29.62	14.87	7.919	4.341	2.899	0.7181
1966	73.99	34.08	11.94	8.913	5.964	1.477
1967	29.62	14.21	8.975	3.363	2.426	0.6031
1968	153	79.77	22.95	9.512	6.353	1.569
1969	29.62	14.43	8.366	3.712	2.478	0.67
1970	29.62	13.84	7.079	2.504	1.671	0.4136
1971	34.13	15.55	8.045	4.056	2.709	0.6822
1972	60.29	26.38	7.778	4.834	3.228	0.8311
1973	29.62	14.27	7.414	2.627	1.784	0.4465
1974	29.62	13.99	7.263	2.752	1.844	0.458
1975	29.62	13.74	7.02	2.571	1.716	0.4255
1976	88.4	41.17	15.75	7.457	4.979	1.231
1977	29.62	14.34	8.797	3.11	2.275	0.5863
1978	29.62	13.44	6.816	3.205	2.145	0.5338
1979	29.62	14.18	7.354	3.564	2.469	0.6124
1980	29.62	14.32	7.453	2.788	1.861	0.4613
1981	29.62	14.67	7.845	2.774	1.859	0.4961
1982	56.03	24.81	7.969	4.745	3.19	0.7894
1983	102	50.91	16.97	7.243	4.866	1.207
1984	224	113	33.21	11.75	7.862	1.943
1985	29.62	13.92	7.135	3.02	2.016	0.5016
1986	29.62	14.51	7.596	3.258	2.465	0.6101
1987	29.62	14.34	7.463	2.643	1.764	0.4367
1988	29.62	14.85	7.871	2.796	1.866	0.4649
1989	29.62	14.13	7.299	2.584	1.725	0.4735
1990	29.62	13.5	6.834	2.418	1.616	0.4067

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	224	113	33.21	11.75	7.862	1.943
0.0645161290322581	153	79.77	22.95	9.512	6.353	1.569
0.0967741935483871	102	50.91	16.97	8.913	5.964	1.477
0.129032258064516	88.4	41.17	15.75	7.457	4.979	1.231
0.161290322580645	73.99	34.08	11.94	7.243	4.866	1.207
0.193548387096774	60.29	26.38	8.975	4.835	3.237	0.8311
0.225806451612903	59.79	25.39	8.797	4.834	3.228	0.8019
0.258064516129032	56.03	24.81	8.786	4.745	3.19	0.7955
0.290322580645161	41.95	20.34	8.366	4.596	3.161	0.7894
0.32258064516129	36.49	18.97	8.045	4.563	3.066	0.7596
0.354838709677419	34.13	17	7.969	4.341	2.899	0.7181
0.387096774193548	33.93	15.55	7.919	4.106	2.809	0.706
0.419354838709677	29.62	14.87	7.871	4.056	2.709	0.6822
0.451612903225806	29.62	14.85	7.845	3.712	2.478	0.67
0.483870967741936	29.62	14.67	7.81	3.564	2.469	0.6124
0.516129032258065	29.62	14.51	7.778	3.363	2.465	0.6101
0.548387096774194	29.62	14.43	7.596	3.258	2.426	0.6031
0.580645161290323	29.62	14.34	7.463	3.205	2.275	0.5863
0.612903225806452	29.62	14.34	7.453	3.11	2.145	0.5338
0.645161290322581	29.62	14.32	7.414	3.02	2.016	0.5016
0.67741935483871	29.62	14.27	7.402	2.796	1.866	0.4961
0.709677419354839	29.62	14.21	7.354	2.788	1.861	0.4735

0.741935483870968	29.62	14.18	7.299	2.774	1.859	0.4649
0.774193548387097	29.62	14.13	7.263	2.752	1.844	0.4613
0.806451612903226	29.62	13.99	7.135	2.643	1.784	0.458
0.838709677419355	29.62	13.92	7.097	2.627	1.764	0.4465
0.870967741935484	29.62	13.84	7.079	2.584	1.725	0.4367
0.903225806451613	29.62	13.74	7.02	2.571	1.716	0.4255
0.935483870967742	29.62	13.5	6.834	2.504	1.671	0.4136
0.967741935483871	29.62	13.44	6.816	2.418	1.616	0.4067
0.1	100.64	49.936	16.848	8.7674	5.8655	1.4524

Average of yearly averages: 0.73703

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilFLfairwaysScenario_2

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	12.7	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	8.2	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	8.2	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

FL Greens Scenario 2

stored as ChlorothalonilFLgreensScenario_2.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wedday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	109	51.02	15.95	10.24	7.699	2.174
1962	105	51.27	15.2	10.79	8.014	2.021
1963	169	104	28.64	14.06	10.45	2.624
1964	137	65.48	18.15	11.17	8.732	2.482
1965	36.93	21.11	11.1	7.721	6.041	1.502
1966	419	189	59.83	27.6	19.62	4.891
1967	124	56.14	17.24	10.45	7.829	2.009
1968	151	78.71	23.54	14.4	10.47	2.862
1969	109	47.55	10.46	6.184	6.122	2.006
1970	29.62	13.84	6.077	5.16	4.217	1.047
1971	92.83	42.2	14.29	8.708	6.697	1.842
1972	138	60.31	17.02	9.512	8.595	2.58
1973	29.63	14.27	6.357	5.36	4.718	1.235
1974	29.62	13.99	7.128	6.162	5.223	1.494
1975	29.62	13.74	6.04	5.671	4.562	1.23
1976	102	47.55	18.06	10.88	8.108	2.268
1977	109	45.09	12.25	7.422	6.656	1.932
1978	29.62	13.45	6.741	5.916	4.865	1.319
1979	109	51.39	18.57	10.06	7.574	1.931
1980	31.59	14.32	6.671	5.728	4.605	1.17
1981	46.98	19.91	6.654	5.269	4.356	1.417
1982	99.76	51.78	15.26	9.767	7.434	1.846
1983	100	50.2	16.27	9.482	8.221	2.188
1984	129	65.08	22.16	11.23	8.595	2.232
1985	29.62	13.92	7.397	6.025	4.809	1.263
1986	130	61.12	19.2	12	9.146	2.274
1987	29.62	14.34	6.391	5.308	4.36	1.085
1988	29.62	14.85	6.72	5.504	4.516	1.17
1989	57.36	28.98	6.968	5.238	4.292	1.469
1990	29.62	13.5	5.884	5.226	4.259	1.147

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	419	189	59.83	27.6	19.62	4.891
0.0645161290322581	169	104	28.64	14.4	10.47	2.862
0.0967741935483871	151	78.71	23.54	14.06	10.45	2.624
0.129032258064516	138	65.48	22.16	12	9.146	2.58
0.161290322580645	137	65.08	19.2	11.23	8.732	2.482
0.193548387096774	130	61.12	18.57	11.17	8.595	2.274
0.225806451612903	129	60.31	18.15	10.88	8.595	2.268
0.258064516129032	124	56.14	18.06	10.79	8.221	2.232
0.290322580645161	109	51.78	17.24	10.45	8.108	2.188
0.32258064516129	109	51.39	17.02	10.24	8.014	2.174
0.354838709677419	109	51.27	16.27	10.06	7.829	2.021
0.387096774193548	109	51.02	15.95	9.767	7.699	2.009
0.419354838709677	105	50.2	15.26	9.512	7.574	2.006
0.451612903225806	102	47.55	15.2	9.482	7.434	1.932
0.483870967741936	100	47.55	14.29	8.708	6.697	1.931
0.516129032258065	99.76	45.09	12.25	7.721	6.656	1.846
0.548387096774194	92.83	42.2	11.1	7.422	6.122	1.842
0.580645161290323	57.36	28.98	10.46	6.184	6.041	1.502

0.612903225806452	46.98	21.11	7.397	6.162	5.223	1.494
0.645161290322581	36.93	19.91	7.128	6.025	4.865	1.469
0.67741935483871	31.59	14.85	6.968	5.916	4.809	1.417
0.709677419354839	29.63	14.34	6.741	5.728	4.718	1.319
0.741935483870968	29.62	14.32	6.72	5.671	4.605	1.263
0.774193548387097	29.62	14.27	6.671	5.504	4.562	1.235
0.806451612903226	29.62	13.99	6.654	5.36	4.516	1.23
0.838709677419355	29.62	13.92	6.391	5.308	4.36	1.17
0.870967741935484	29.62	13.84	6.357	5.269	4.356	1.17
0.903225806451613	29.62	13.74	6.077	5.238	4.292	1.147
0.935483870967742	29.62	13.5	6.04	5.226	4.259	1.085
0.967741935483871	29.62	13.45	5.884	5.16	4.217	1.047

0.1 149.7 77.387 23.402 13.854 10.3196 2.6196

Average of yearly averages: 1.890333333333333

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilFLgreensScenario_2

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
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Molecular weight mwt 265.9 g/mol

Henry's Law Const. henry 2.6e-7 atm-m^3/mol

Vapor Pressure vapr 5.72e-7 torr

Solubility sol 0.8 mg/L

Kd Kd mg/L

Koc Koc 554 mg/L

Photolysis half-life kdp 0.5 days Half-life

Aerobic Aquatic Metabolism kbacw 1.5 days Halfife

Anaerobic Aquatic Metabolism kbacs 151 days Halfife

Aerobic Soil Metabolism asm 33 days Halfife

Hydrolysis: pH 7 0 days Half-life

Method: CAM 2 integer See PRZM manual

Incorporation Depth: DEPI 0 cm

Application Rate: TAPP 12.7 kg/ha

Application Efficiency: APPEFF 0.99 fraction

Spray Drift DRFT .064 fraction of application rate applied to pond

Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm

Interval 1 interval 14 days Set to 0 or delete line for single app.

app. rate 1 apprate 12.6 kg/ha

Interval 2 interval 14 days Set to 0 or delete line for single app.

app. rate 2 apprate 8.2 kg/ha

Interval 3 interval 7 days Set to 0 or delete line for single app.

app. rate 3 apprate 8.2 kg/ha

Interval 4 interval 7 days Set to 0 or delete line for single app.

app. rate 4 apprate 8.2 kg/ha

Interval 5 interval 7 days Set to 0 or delete line for single app.

app. rate 5 apprate 8.2 kg/ha

Interval 6 interval 7 days Set to 0 or delete line for single app.

app. rate 6 apprate 8.2 kg/ha

Interval 7 interval 7 days Set to 0 or delete line for single app.

app. rate 7 apprate 8.2 kg/ha

Interval 8 interval 7 days Set to 0 or delete line for single app.

app. rate 8 apprate 7.5 kg/ha

Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

FL Tees Scenario 2

stored as ChlorothalonilFLteesScenario_1.out

Chemical: Chlorothalonil

PRZM environment: FLturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:38

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w12834.dvf modified Wednesday, 3 July 2002 at 10:04:28

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	108	50.29	15.3	8.69	6.093	1.565
1962	98.37	42.42	12.44	9.989	6.777	1.685
1963	177	108	29.22	13.62	9.204	2.287
1964	137	64.74	17.42	9.218	6.557	1.697
1965	35.89	21.02	11.01	7.211	4.82	1.196
1966	397	179	57.12	26.44	17.9	4.444
1967	54.53	24.68	7.132	6.498	5.068	1.277
1968	129	76.19	22.09	13.08	8.763	2.191
1969	56.94	24.92	8.211	5.762	3.988	1.362
1970	17.76	8.287	5.312	4.593	3.068	0.7609
1971	97.08	44.13	14.17	8.306	5.551	1.433
1972	150	65.76	17.88	9.446	6.311	1.824
1973	17.89	8.6	5.566	4.808	3.341	0.8521
1974	21.82	11.52	6.483	5.457	3.716	0.9531
1975	18.52	8.215	5.438	4.99	3.337	0.8454
1976	189	88	25.25	12.51	8.356	2.16
1977	58.34	24.13	6.522	4.943	4.503	1.265
1978	39.8	16.64	7.393	5.436	3.687	0.9469
1979	104	43.45	13.86	8.292	5.873	1.462
1980	29.32	12.96	6.093	5.215	3.483	0.8712
1981	23.62	10.01	5.866	4.727	3.186	0.9567
1982	126	62.68	17.26	9.32	6.511	1.614
1983	79.18	39.71	16.8	9.051	6.528	1.683
1984	159	80.29	23.67	11.48	7.758	1.938
1985	29.93	12.56	7.077	5.443	3.636	0.9236
1986	79.88	34.06	10.49	7.17	5.752	1.426
1987	17.91	8.653	5.597	4.771	3.187	0.7906
1988	18.09	9.04	5.897	4.954	3.309	0.8398
1989	27.62	13.95	5.478	4.717	3.15	0.975
1990	17.67	8.039	5.14	4.592	3.075	0.7891

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129	397	179	57.12	26.44	17.9	4.444
0.0645161290322581	189	108	29.22	13.62	9.204	2.287

0.0967741935483871	177	88	25.25	13.08	8.763	2.191
0.129032258064516	159	80.29	23.67	12.51	8.356	2.16
0.161290322580645	150	76.19	22.09	11.48	7.758	1.938
0.193548387096774	137	65.76	17.88	9.989	6.777	1.824
0.225806451612903	129	64.74	17.42	9.446	6.557	1.697
0.258064516129032	126	62.68	17.26	9.32	6.528	1.685
0.290322580645161	108	50.29	16.8	9.218	6.511	1.683
0.32258064516129	104	44.13	15.3	9.051	6.311	1.614
0.354838709677419	98.37	43.45	14.17	8.69	6.093	1.565
0.387096774193548	97.08	42.42	13.86	8.306	5.873	1.462
0.419354838709677	79.88	39.71	12.44	8.292	5.752	1.433
0.451612903225806	79.18	34.06	11.01	7.211	5.551	1.426
0.483870967741936	58.34	24.92	10.49	7.17	5.068	1.362
0.516129032258065	56.94	24.68	8.211	6.498	4.82	1.277
0.548387096774194	54.53	24.13	7.393	5.762	4.503	1.265
0.580645161290323	39.8	21.02	7.132	5.457	3.988	1.196
0.612903225806452	35.89	16.64	7.077	5.443	3.716	0.975
0.645161290322581	29.93	13.95	6.522	5.436	3.687	0.9567
0.67741935483871	29.32	12.96	6.483	5.215	3.636	0.9531
0.709677419354839	27.62	12.56	6.093	4.99	3.483	0.9469
0.741935483870968	23.62	11.52	5.897	4.954	3.341	0.9236
0.774193548387097	21.82	10.01	5.866	4.943	3.337	0.8712
0.806451612903226	18.52	9.04	5.597	4.808	3.309	0.8521
0.838709677419355	18.09	8.653	5.566	4.771	3.187	0.8454
0.870967741935484	17.91	8.6	5.478	4.727	3.186	0.8398
0.903225806451613	17.89	8.287	5.438	4.717	3.15	0.7906
0.935483870967742	17.76	8.215	5.312	4.593	3.075	0.7891
0.967741935483871	17.67	8.039	5.14	4.592	3.068	0.7609

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilFLteesScenario_1

Metfile: w12834.dvf

PRZM scenario: FLturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
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Molecular weight mwt 265.9 g/mol

Henry's Law Const. henry 2.6e-7 atm-m³/mol

Vapor Pressure vapr 5.72e-7 torr

Solubility sol 0.8 mg/L

Kd Kd mg/L

Koc Koc 554 mg/L

Photolysis half-life kdp 0.5 days Half-life

Aerobic Aquatic Metabolism kbacw 1.5 days

Anaerobic Aquatic Metabolism kbacs 151 days

Aerobic Soil Metabolism

Hydrolysis: pH 7 0 days Half-life

Method: CAM 2 integer See PRZM 1

Incorporation Depth: DEPI 0 cm

Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	7.3	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	7.3	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	7.3	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	7.3	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	7.3	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.
app. rate 7	apprate	7.3	kg/ha	
Record 17:	FILTRA			

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Golf Course Scenario 1

PA Fairways Scenario 1

stored as ChlorothalonilPAfairwaysScenario_1.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	72.07	35.27	9.237	5.028	4.769	1.267
1962	19.41	11.36	7.763	3.878	2.745	0.7246
1963	20	12.21	8.399	3.753	2.526	0.6547
1964	22.22	14.48	8.862	4.149	2.846	0.7236
1965	19.01	10.74	7.288	3.377	2.316	0.5873
1966	120	68.33	18.2	6.474	4.394	1.694
1967	50.08	24.73	9.965	6.275	4.817	1.228
1968	103	76.27	26.01	10.17	6.798	1.853
1969	160	77.07	22.44	8.57	7.598	1.907
1970	19.24	11.11	7.589	4.596	3.131	0.7896
1971	50.45	27.75	8.742	3.849	4.433	1.158
1972	975	577	159	59.69	39.93	9.942
1973	70.84	53.86	20.07	7.974	5.329	1.517
1974	19.66	11.74	8.072	3.934	3.091	0.8312
1975	57.78	30.44	9.173	6.827	4.577	1.19
1976	21.12	15.21	10.9	4.653	3.422	0.881
1977	19.34	11.29	7.792	3.651	2.438	0.617
1978	41.47	23.56	8.496	6.669	4.466	1.113

1979	21.65	15.41	9.532	5.118	3.424	0.9089
1980	26.43	15.96	9.428	4.207	2.811	0.7625
1981	19.94	12.13	8.349	3.796	2.789	0.6997
1982	152	89.33	47.85	19.45	13.01	3.243
1983	44.67	28.85	13.97	5.835	3.899	0.9898
1984	114	72.87	24.94	11.2	7.496	1.868
1985	22.19	14.25	10.45	4.732	3.163	0.8363
1986	26.17	13.88	8.016	3.637	3.55	0.8986
1987	69.46	35	9.843	6.522	4.366	1.161
1988	24.23	12.05	8.34	3.754	3.056	0.7701
1989	33.04	17.49	9.989	6.329	4.545	1.16
1990	184	116	34.78	13.56	9.186	2.336

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly	
0.032258064516129		975	577	159	59.69	39.93	9.942
0.0645161290322581		184	116	47.85	19.45	13.01	3.243
0.0967741935483871		160	89.33	34.78	13.56	9.186	2.336
0.129032258064516		152	77.07	26.01	11.2	7.598	1.907
0.161290322580645		120	76.27	24.94	10.17	7.496	1.868
0.193548387096774		114	72.87	22.44	8.57	6.798	1.853
0.225806451612903		103	68.33	20.07	7.974	5.329	1.694
0.258064516129032		72.07	53.86	18.2	6.827	4.817	1.517
0.290322580645161		70.84	35.27	13.97	6.669	4.769	1.267
0.32258064516129		69.46	35	10.9	6.522	4.577	1.228
0.354838709677419		57.78	30.44	10.45	6.474	4.545	1.19
0.387096774193548		50.45	28.85	9.989	6.329	4.466	1.161
0.419354838709677		50.08	27.75	9.965	6.275	4.433	1.16
0.451612903225806		44.67	24.73	9.843	5.835	4.394	1.158
0.483870967741936		41.47	23.56	9.532	5.118	4.366	1.113
0.516129032258065		33.04	17.49	9.428	5.028	3.899	0.9898
0.548387096774194		26.43	15.96	9.237	4.732	3.55	0.9089
0.580645161290323		26.17	15.41	9.173	4.653	3.424	0.8986
0.612903225806452		24.23	15.21	8.862	4.596	3.422	0.881
0.645161290322581		22.22	14.48	8.742	4.207	3.163	0.8363
0.67741935483871		22.19	14.25	8.496	4.149	3.131	0.8312
0.709677419354839		21.65	13.88	8.399	3.934	3.091	0.7896
0.741935483870968		21.12	12.21	8.349	3.878	3.056	0.7701
0.774193548387097		20	12.13	8.34	3.849	2.846	0.7625
0.806451612903226		19.94	12.05	8.072	3.796	2.811	0.7246
0.838709677419355		19.66	11.74	8.016	3.754	2.789	0.7236
0.870967741935484		19.41	11.36	7.792	3.753	2.745	0.6997
0.903225806451613		19.34	11.29	7.763	3.651	2.526	0.6547
0.935483870967742		19.24	11.11	7.589	3.637	2.438	0.617
0.967741935483871		19.01	10.74	7.288	3.377	2.316	0.5873

0.1 159.2 88.104 33.903 13.324 9.0272 2.2931

Average of yearly averages: 1.47706333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAfairwaysScenario_1

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil
 Description Variable Name Value Units Comments
 Molecular weight mwt 265.9 g/mol
 Henry's Law Const. henry 2.6e-7 atm-m^3/mol
 Vapor Pressure vapr 5.72e-7 torr
 Solubility sol 0.8 mg/L
 Kd Kd mg/L
 Koc Koc 554 mg/L
 Photolysis half-life kdp 0.5 days Half-life
 Aerobic Aquatic Metabolism kbacw 1.5 days Half-life
 Anaerobic Aquatic Metabolism kbacs 151 days Half-life
 Aerobic Soil Metabolism asm 33 days Half-life
 Hydrolysis: pH 7 0 days Half-life
 Method: CAM 2 integer See PRZM manual
 Incorporation Depth: DEPI 0 cm
 Application Rate: TAPP 7.3 kg/ha
 Application Efficiency: APPEFF 0.99 fraction
 Spray Drift DRFT .064 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 7.3 kg/ha
 Interval 2 interval 7 days Set to 0 or delete line for single app.
 app. rate 2 apprate 7.3 kg/ha
 Interval 3 interval 7 days Set to 0 or delete line for single app.
 app. rate 3 apprate 7.3 kg/ha
 Record 17: FILTRA
 IPSCND1
 UPTKF
 Record 18: PLVKRT
 PLDKRT
 FEXTRC 0.5
 Flag for Index Res. Run IR Reservoir
 Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Greens Scenario 1

stored as ChlorothalonilPAgreensScenario_1.out

Chemical: Chlorothalonil

PRZM environment: PAturffSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	366	179	46.33	21.38	16.35	4.5
1962	65.79	33.48	9.107	8.349	7.66	2.351
1963	22.47	13.72	9.44	7.98	6.027	1.727
1964	29.27	16.27	9.989	9.1	6.797	1.85
1965	21.36	12.06	8.188	7.562	6.023	1.591
1966	400	229	60.89	21.66	15.4	5.02
1967	128	71.66	21.41	15.8	13.76	3.552
1968	149	85.67	29.22	15.24	10.71	3.966
1969	905	435	128	49.37	35.34	8.893
1970	46.42	28.2	14.41	11.06	8.541	2.217
1971	300	164	48.15	20.88	16.96	4.576
1972	2160	1280	360	132	89.02	22.51

1973	137	75.91	22.58	12.69	9.053	3.588
1974	103	48.1	15.73	10.33	9.61	2.88
1975	213	112	32.3	17.6	12.46	4.29
1976	79.31	40	13.71	10.15	8.862	2.501
1977	21.73	12.68	8.756	8.187	6.032	1.578
1978	128	74.83	31.85	16.91	11.98	3.003
1979	56.32	30.35	13.93	11.2	8.15	2.421
1980	29.69	17.93	10.59	8.716	6.353	2.001
1981	65.25	31.45	11.96	9.2	8.144	2.078
1982	171	100	59.19	27.89	19.29	4.844
1983	50.18	32.41	15.69	10.53	7.593	1.982
1984	128	81.86	29.18	17.69	12.43	3.136
1985	28.11	16.31	11.75	9.985	7.389	2.178
1986	146	77.39	22.14	13.53	11.96	3.067
1987	141	71.14	22.14	13.04	9.256	2.85
1988	127	56.06	15.82	10.46	8.66	2.209
1989	132	65.37	24	16.57	12.25	3.473
1990	207	131	39.08	20.44	14.49	3.97

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		2160	1280	360	132	89.02
0.0645161290322581		905	435	128	49.37	35.34
0.0967741935483871		400	229	60.89	27.89	19.29
0.129032258064516		366	179	59.19	21.66	16.96
0.161290322580645		300	164	48.15	21.38	16.35
0.193548387096774		213	131	46.33	20.88	15.4
0.225806451612903		207	112	39.08	20.44	14.49
0.258064516129032		171	100	32.3	17.69	13.76
0.290322580645161		149	85.67	31.85	17.6	12.46
0.32258064516129		146	81.86	29.22	16.91	12.43
0.354838709677419		141	77.39	29.18	16.57	12.25
0.387096774193548		137	75.91	24	15.8	11.98
0.419354838709677		132	74.83	22.58	15.24	11.96
0.451612903225806		128	71.66	22.14	13.53	10.71
0.483870967741936		128	71.14	22.14	13.04	9.61
0.516129032258065		128	65.37	21.41	12.69	9.256
0.548387096774194		127	56.06	15.82	11.2	9.053
0.580645161290323		103	48.1	15.73	11.06	8.862
0.612903225806452		79.31	40	15.69	10.53	8.66
0.645161290322581		65.79	33.48	14.41	10.46	8.541
0.67741935483871		65.25	32.41	13.93	10.33	8.15
0.709677419354839		56.32	31.45	13.71	10.15	8.144
0.741935483870968		50.18	30.35	11.96	9.985	7.66
0.774193548387097		46.42	28.2	11.75	9.2	7.593
0.806451612903226		29.69	17.93	10.59	9.1	7.389
0.838709677419355		29.27	16.31	9.989	8.716	6.797
0.870967741935484		28.11	16.27	9.44	8.349	6.353
0.903225806451613		22.47	13.72	9.107	8.187	6.032
0.935483870967742		21.73	12.68	8.756	7.98	6.027
0.967741935483871		21.36	12.06	8.188	7.562	6.023

0.1 396.6 224 60.72 27.267 19.057 5.0024

Average of yearly averages: 3.82673333333333

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAgreensScenario_1

Metfile: w14751.dvf

PRZM scenario: PAturffSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer		See PRZM manual
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	8.2	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064		fraction of application rate applied to pond
Application Date	Date	15-5		dd/mm or dd/mmm or dd-mm or dd-mmm
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	8.2	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	8.2	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	8.2	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	8.2	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	8.2	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	8.2	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.
app. rate 7	apprate	8.2	kg/ha	
Interval 8	interval	7	days	Set to 0 or delete line for single app.
app. rate 8	apprate	8.2	kg/ha	
Interval 9	interval	7	days	Set to 0 or delete line for single app.
app. rate 9	apprate	8.2	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total		none, monthly or total(average of entire run)

PA Tees Scenario 1

stored as ChlorothalonilPAteesScenario_1.out

Chemical: Chlorothalonil

PRZM environment: PAturfSTD.txt modified Tuesday, 26 August 2008 at 06:16:42
 EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12
 Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14
 Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	210	103	25.02	13.41	10.65	2.894
1962	37.14	18.9	8.105	6.882	5.442	1.6
1963	20	12.22	8.402	6.572	4.472	1.232
1964	22.22	14.48	8.891	7.201	5.097	1.341
1965	19.01	10.74	7.289	6.199	4.358	1.128
1966	265	151	40.35	14.35	9.826	3.447
1967	114	63.79	18.48	11.53	9.79	2.512
1968	103	76.27	26.02	13.05	8.724	2.842
1969	557	268	78.13	30.66	22.49	5.654
1970	38.08	21.68	11.75	9.308	6.507	1.668
1971	179	98.29	28.79	12.55	11.02	2.951
1972	1930	1140	321	117	78.4	19.67
1973	70.88	53.89	20.1	10.76	7.209	2.513
1974	55.64	26.08	8.075	7.021	6.559	1.893
1975	190	100	28.54	15.11	10.18	2.896
1976	41.39	20.88	10.91	7.464	6.156	1.672
1977	19.35	11.29	7.794	6.754	4.515	1.162
1978	114	66.62	28.01	14.49	9.727	2.435
1979	50.13	27.02	12.4	9.404	6.303	1.775
1980	26.43	15.96	9.43	7.241	4.84	1.431
1981	31.6	15.24	8.351	6.726	5.59	1.417
1982	152	89.33	52.68	24.28	16.26	4.069
1983	44.67	28.85	13.97	8.846	5.915	1.527
1984	114	72.87	25.97	15.2	10.18	2.548
1985	22.19	14.25	10.46	8.294	5.554	1.568
1986	84.38	44.74	12.25	8.115	7.939	2.027
1987	126	63.36	19.72	11.1	7.442	2.127
1988	82.32	36.27	8.342	7.218	6.254	1.591
1989	83.19	41.07	14.7	12.36	9.172	2.439
1990	184	116	34.78	17.06	11.82	3.116

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		1930	1140	321	117	78.4
0.0645161290322581		557	268	78.13	30.66	22.49
0.0967741935483871		265	151	52.68	24.28	16.26
0.129032258064516		210	116	40.35	17.06	11.82
0.161290322580645		190	103	34.78	15.2	11.02
0.193548387096774		184	100	28.79	15.11	10.65
0.225806451612903		179	98.29	28.54	14.49	10.18
0.258064516129032		152	89.33	28.01	14.35	10.18
0.290322580645161		126	76.27	26.02	13.41	9.826
0.32258064516129		114	72.87	25.97	13.05	9.79
0.354838709677419		114	66.62	25.02	12.55	9.727
0.387096774193548		114	63.79	20.1	12.36	9.172
0.419354838709677		103	63.36	19.72	11.53	8.724
0.451612903225806		84.38	53.89	18.48	11.1	7.939
0.483870967741936		83.19	44.74	14.7	10.76	7.442
0.516129032258065		82.32	41.07	13.97	9.404	7.209
0.548387096774194		70.88	36.27	12.4	9.308	6.559

0.580645161290323	55.64	28.85	12.25	8.846	6.507	1.775
0.612903225806452	50.13	27.02	11.75	8.294	6.303	1.672
0.645161290322581	44.67	26.08	10.91	8.115	6.254	1.668
0.67741935483871	41.39	21.68	10.46	7.464	6.156	1.6
0.709677419354839	38.08	20.88	9.43	7.241	5.915	1.591
0.741935483870968	37.14	18.9	8.891	7.218	5.59	1.568
0.774193548387097	31.6	15.96	8.402	7.201	5.554	1.527
0.806451612903226	26.43	15.24	8.351	7.021	5.442	1.431
0.838709677419355	22.22	14.48	8.342	6.882	5.097	1.417
0.870967741935484	22.19	14.25	8.105	6.754	4.84	1.341
0.903225806451613	20	12.22	8.075	6.726	4.515	1.232
0.935483870967742	19.35	11.29	7.794	6.572	4.472	1.162
0.967741935483871	19.01	10.74	7.289	6.199	4.358	1.128

0.1 259.5 147.5 51.447 23.558 15.816 4.0068

Average of yearly averages: 2.83816666666667

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAteesScenario_1

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure vapr	5.72e-7	torr		
Solubility sol	0.8	mg/L		
Kd Kd		mg/L		
Koc Koc	554	mg/L		
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	7.3	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	7	days	Set to 0 or delete line for single app.
app. rate 1	apprate	7.3	kg/ha	
Interval 2	interval	7	days	Set to 0 or delete line for single app.
app. rate 2	apprate	7.3	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	7.3	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	7.3	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	7.3	kg/ha	
Interval 6	interval	7	days	Set to 0 or delete line for single app.
app. rate 6	apprate	7.3	kg/ha	
Interval 7	interval	7	days	Set to 0 or delete line for single app.

app. rate 7 apprate 7.3 kg/ha
Record 17: FILTRA

IPSCND1
UPTKF

Record 18: PLVKRT

PLDKRT
FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Golf Course Scenario 2

PA Fairways Scenario 2

stored as ChlorothalonilPAfairwaysScenario_2.out

Chemical: Chlorothalonil

PRZM environment: PAturSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thursday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wednesday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	66.1	32.36	12.38	4.493	4.835	1.276
1962	29.62	17.42	10.36	4.029	2.824	0.7372
1963	29.62	18.22	11.25	4.043	2.714	0.6936
1964	29.62	17.21	10.14	4.307	2.951	0.7487
1965	29.62	16.79	9.704	3.511	2.398	0.606
1966	108	61.74	16.45	5.85	3.971	1.647
1967	43.1	21.28	13.48	6.57	4.923	1.25
1968	144	104	35.11	13.02	8.699	2.26
1969	137	65.68	19.11	6.725	6.967	1.749
1970	29.63	17.17	10.1	4.597	3.123	0.7854
1971	36.1	19.92	11.74	4.214	4.149	1.07
1972	765	453	125	47.81	31.97	7.946
1973	93.14	71.73	27.09	9.926	6.632	1.786
1974	29.63	17.78	10.77	4.095	3.114	0.8252
1975	48.52	25.57	10.53	6.537	4.38	1.129
1976	31.99	23.54	14.85	5.41	3.799	0.9583
1977	29.62	17.32	10.31	3.749	2.504	0.6326
1978	33.17	18.86	11.39	6.379	4.269	1.063
1979	29.62	19.33	12.78	5.267	3.522	0.9155
1980	35.48	22.52	13.14	4.739	3.166	0.8396
1981	29.62	18.14	11.17	4.058	2.933	0.7348
1982	198	117	56.37	23.05	15.42	3.84
1983	58.82	37.99	18.95	6.837	4.569	1.156
1984	146	93.13	31.66	12.95	8.66	2.157
1985	33.96	24.79	14.49	5.283	3.531	0.9154
1986	29.62	17.69	10.71	3.854	3.552	0.8971
1987	59.68	30.07	10.78	6.376	4.266	1.124
1988	29.63	18.14	11.17	4.021	3.111	0.7806
1989	35.88	24.95	13.91	6.636	4.697	1.192
1990	236	149	43.62	16.63	11.21	2.823

Sorted results

Prob. Peak 96 hr 21 Day 60 Day 90 Day Yearly

0.032258064516129	765	453	125	47.81	31.97	7.946
0.0645161290322581	236	149	56.37	23.05	15.42	3.84
0.0967741935483871	198	117	43.62	16.63	11.21	2.823
0.129032258064516	146	104	35.11	13.02	8.699	2.26
0.161290322580645	144	93.13	31.66	12.95	8.66	2.157
0.193548387096774	137	71.73	27.09	9.926	6.967	1.786
0.225806451612903	108	65.68	19.11	6.837	6.632	1.749
0.258064516129032	93.14	61.74	18.95	6.725	4.923	1.647
0.290322580645161	66.1	37.99	16.45	6.636	4.835	1.276
0.32258064516129	59.68	32.36	14.85	6.57	4.697	1.25
0.354838709677419	58.82	30.07	14.49	6.537	4.569	1.192
0.387096774193548	48.52	25.57	13.91	6.379	4.38	1.156
0.419354838709677	43.1	24.95	13.48	6.376	4.269	1.129
0.451612903225806	36.1	24.79	13.14	5.85	4.266	1.124
0.483870967741936	35.88	23.54	12.78	5.41	4.149	1.07
0.516129032258065	35.48	22.52	12.38	5.283	3.971	1.063
0.548387096774194	33.96	21.28	11.74	5.267	3.799	0.9583
0.580645161290323	33.17	19.92	11.39	4.739	3.552	0.9155
0.612903225806452	31.99	19.33	11.25	4.597	3.531	0.9154
0.645161290322581	29.63	18.86	11.17	4.493	3.522	0.8971
0.67741935483871	29.63	18.22	11.17	4.307	3.166	0.8396
0.709677419354839	29.63	18.14	10.78	4.214	3.123	0.8252
0.741935483870968	29.62	18.14	10.77	4.095	3.114	0.7854
0.774193548387097	29.62	17.78	10.71	4.058	3.111	0.7806
0.806451612903226	29.62	17.69	10.53	4.043	2.951	0.7487
0.838709677419355	29.62	17.42	10.36	4.029	2.933	0.7372
0.870967741935484	29.62	17.32	10.31	4.021	2.824	0.7348
0.903225806451613	29.62	17.21	10.14	3.854	2.714	0.6936
0.935483870967742	29.62	17.17	10.1	3.749	2.504	0.6326
0.967741935483871	29.62	16.79	9.704	3.511	2.398	0.606

0.1 192.8 115.7 42.769 16.269 10.9589 2.7667

Average of yearly averages: 1.4846

Inputs generated by pe5.pl - Novemeber 2006

Data used for this run:

Output File: ChlorothalonilPAfairwaysScenario_2

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable	Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol		
Vapor Pressure	vapr	5.72e-7	torr		
Solubility	sol	0.8	mg/L		
Kd	Kd		mg/L		
Koc	Koc	554	mg/L		
Photolysis half-life	kdp	0.5	days	Half-life	
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife	
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife	
Aerobic Soil Metabolism	asm	33	days	Halfife	
Hydrolysis:	pH 7	0	days	Half-life	
Method:	CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm		

Application Rate: TAPP 12.7 kg/ha
 Application Efficiency: APPEFF 0.99 fraction
 Spray Drift DRFT .064 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 7 days Set to 0 or delete line for single app.
 app. rate 1 apprate 8.2 kg/ha
 Interval 2 interval 7 days Set to 0 or delete line for single app.
 app. rate 2 apprate 8.2 kg/ha
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Greens Scenario 2

stored as ChlorothalonilPAgreensScenario_2.out

Chemical: Chlorothalonil

PRZM environment: PAturSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	345	169	45.91	20.62	15.73	4.476
1962	79.28	40.34	10.44	8.121	7.826	2.489
1963	30.09	18.37	9.417	7.191	5.953	1.746
1964	29.81	17.25	8.768	8.127	6.576	1.838
1965	29.73	16.79	8.222	6.784	6.016	1.613
1966	410	234	62.41	22.21	16.13	5.09
1967	109	62.05	22.34	16.61	13.83	3.58
1968	180	102	26.65	12.47	9.27	3.888
1969	842	412	130	49.64	35.24	8.884
1970	44.33	26.66	13.64	9.839	8.271	2.161
1971	334	183	54.93	23.31	18.12	4.911
1972	1720	1020	288	106	71.89	18.34
1973	163	90.27	23.33	10.46	7.994	3.527
1974	119	55.59	19.56	11.57	9.944	3.042
1975	192	101	29.63	15.65	11.6	4.634
1976	72.71	44.4	14.92	10.11	8.796	2.607
1977	29.84	17.41	8.73	7.316	5.889	1.562
1978	112	65.92	28.74	15.02	11.19	2.81
1979	50.42	27.17	13.15	9.958	7.803	2.42
1980	31.46	18.46	11.53	8.201	6.427	2.122
1981	62.79	30.27	12.98	9.183	8.15	2.094
1982	183	107	52.81	24.99	17.82	4.485
1983	33.96	21.76	13.94	9.068	7.047	1.862
1984	137	87.22	27.29	16.24	11.92	3.026
1985	33.96	24.79	12.68	9.367	7.502	2.252
1986	184	97.35	26.7	15.54	12.82	3.31
1987	113	56.75	18.63	11.08	8.355	2.719
1988	118	58.9	16.58	10.25	8.318	2.133
1989	125	61.88	22.95	14.77	12.12	3.564

1990 219 139 38.09 19.58 14.46 4.065

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		1720	1020	288	106	71.89
0.0645161290322581		842	412	130	49.64	35.24
0.0967741935483871		410	234	62.41	24.99	18.12
0.129032258064516		345	183	54.93	23.31	17.82
0.161290322580645		334	169	52.81	22.21	16.13
0.193548387096774		219	139	45.91	20.62	15.73
0.225806451612903		192	107	38.09	19.58	14.46
0.258064516129032		184	102	29.63	16.61	13.83
0.290322580645161		183	101	28.74	16.24	12.82
0.32258064516129		180	97.35	27.29	15.65	12.12
0.354838709677419		163	90.27	26.7	15.54	11.92
0.387096774193548		137	87.22	26.65	15.02	11.6
0.419354838709677		125	65.92	23.33	14.77	11.19
0.451612903225806		119	62.05	22.95	12.47	9.944
0.483870967741936		118	61.88	22.34	11.57	9.27
0.516129032258065		113	58.9	19.56	11.08	8.796
0.548387096774194		112	56.75	18.63	10.46	8.355
0.580645161290323		109	55.59	16.58	10.25	8.318
0.612903225806452		79.28	44.4	14.92	10.11	8.271
0.645161290322581		72.71	40.34	13.94	9.958	8.15
0.67741935483871		62.79	30.27	13.64	9.839	7.994
0.709677419354839		50.42	27.17	13.15	9.367	7.826
0.741935483870968		44.33	26.66	12.98	9.183	7.803
0.774193548387097		33.96	24.79	12.68	9.068	7.502
0.806451612903226		33.96	21.76	11.53	8.201	7.047
0.838709677419355		31.46	18.46	10.44	8.127	6.576
0.870967741935484		30.09	18.37	9.417	8.121	6.427
0.903225806451613		29.84	17.41	8.768	7.316	6.016
0.935483870967742		29.81	17.25	8.73	7.191	5.953
0.967741935483871		29.73	16.79	8.222	6.784	5.889

0.1 403.5 228.9 61.662 24.822 18.09 5.0721

Average of yearly averages: 3.70833333333333

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilPAgreensScenario_2

Metfile: w14751.dvf

PRZM scenario: PAturfSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight	mwt	265.9	g/mol	

Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
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Vapor Pressure	vapr	5.72e-7	torr	
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Solubility	sol	0.8	mg/L	
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Kd	Kd		mg/L	
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Koc	Koc	554	mg/L	
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Photolysis half-life	kdp	0.5	days	Half-life
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Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
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Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
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Aerobic Soil Metabolism asm 33 days Halfife
 Hydrolysis: pH 7 0 days Half-life
 Method: CAM 2 integer See PRZM manual
 Incorporation Depth: DEPI 0 cm
 Application Rate: TAPP 12.7 kg/ha
 Application Efficiency: APPEFF 0.99 fraction
 Spray Drift DRFT .064 fraction of application rate applied to pond
 Application Date Date 15-5 dd/mm or dd/mmm or dd-mm or dd-mmm
 Interval 1 interval 14 days Set to 0 or delete line for single app.
 app. rate 1 apprate 12.6 kg/ha
 Interval 2 interval 14 days Set to 0 or delete line for single app.
 app. rate 2 apprate 8.2 kg/ha
 Interval 3 interval 7 days Set to 0 or delete line for single app.
 app. rate 3 apprate 8.2 kg/ha
 Interval 4 interval 7 days Set to 0 or delete line for single app.
 app. rate 4 apprate 8.2 kg/ha
 Interval 5 interval 7 days Set to 0 or delete line for single app.
 app. rate 5 apprate 8.2 kg/ha
 Interval 6 interval 7 days Set to 0 or delete line for single app.
 app. rate 6 apprate 8.2 kg/ha
 Interval 7 interval 7 days Set to 0 or delete line for single app.
 app. rate 7 apprate 8.2 kg/ha
 Interval 8 interval 7 days Set to 0 or delete line for single app.
 app. rate 8 apprate 7.5 kg/ha
 Record 17: FILTRA

IPSCND1

UPTKF

Record 18: PLVKRT

PLDKRT

FEXTRC 0.5

Flag for Index Res. Run IR Reservoir

Flag for runoff calc. RUNOFF total none, monthly or total(average of entire run)

PA Tees Scenario 2

stored as ChlorothalonilPAteesScenario_2.out

Chemical: Chlorothalonil

PRZM environment: PAturSTD.txt modified Tuesday, 26 August 2008 at 06:16:42

EXAMS environment: ir298.exv modified Thuday, 29 August 2002 at 16:34:12

Metfile: w14751.dvf modified Wedday, 3 July 2002 at 10:06:14

Water segment concentrations (ppb)

Year	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
1961	211	103	25.12	13.4	10.56	2.874
1962	39.06	19.88	8.292	6.651	5.331	1.586
1963	29.63	18.22	8.95	6.417	4.368	1.206
1964	29.63	17.21	8.132	6.929	4.927	1.302
1965	29.63	16.79	7.798	6.023	4.244	1.101
1966	253	145	38.56	13.72	9.53	3.318
1967	107	60.9	18.31	11.12	9.494	2.436
1968	89.32	66.21	22.79	11.69	7.816	2.615
1969	556	267	77.94	30.47	22.34	5.617
1970	39.11	22.29	12.25	9.012	6.317	1.621
1971	174	95.64	28.01	12.59	10.75	2.878
1972	1680	996	281	103	68.81	17.28
1973	70.56	46.02	17.84	9.664	6.474	2.334

1974	57.32	26.87	8.607	6.801	6.467	1.878
1975	189	99.76	29.04	14.69	9.906	2.849
1976	39.43	23.54	12.14	7.61	6.199	1.678
1977	29.63	17.32	8.28	6.54	4.373	1.127
1978	109	64.6	27.94	14.05	9.434	2.363
1979	49.15	26.48	12.99	9.077	6.085	1.723
1980	29.63	17.43	11.08	7.444	4.977	1.463
1981	32.67	18.15	8.896	6.561	5.519	1.4
1982	171	101	50.31	23.45	15.71	3.934
1983	30.7	19.67	13.44	8.279	5.535	1.432
1984	127	81.06	25.59	14.99	10.04	2.516
1985	33.96	24.79	12.19	8.503	5.695	1.603
1986	82.72	43.86	12	8.313	7.759	1.982
1987	109	54.83	18.17	10.18	6.823	1.97
1988	81.62	35.97	8.926	7.158	6.133	1.559
1989	85.36	42.14	15.45	11.55	9.057	2.415
1990	204	129	35.84	17.66	12.21	3.207

Sorted results

Prob.	Peak	96 hr	21 Day	60 Day	90 Day	Yearly
0.032258064516129		1680	996	281	103	68.81
0.0645161290322581		556	267	77.94	30.47	22.34
0.0967741935483871		253	145	50.31	23.45	15.71
0.129032258064516		211	129	38.56	17.66	12.21
0.161290322580645		204	103	35.84	14.99	10.75
0.193548387096774		189	101	29.04	14.69	10.56
0.225806451612903		174	99.76	28.01	14.05	10.04
0.258064516129032		171	95.64	27.94	13.72	9.906
0.290322580645161		127	81.06	25.59	13.4	9.53
0.32258064516129		109	66.21	25.12	12.59	9.494
0.354838709677419		109	64.6	22.79	11.69	9.434
0.387096774193548		107	60.9	18.31	11.55	9.057
0.419354838709677		89.32	54.83	18.17	11.12	7.816
0.451612903225806		85.36	46.02	17.84	10.18	7.759
0.483870967741936		82.72	43.86	15.45	9.664	6.823
0.516129032258065		81.62	42.14	13.44	9.077	6.474
0.548387096774194		70.56	35.97	12.99	9.012	6.467
0.580645161290323		57.32	26.87	12.25	8.503	6.317
0.612903225806452		49.15	26.48	12.19	8.313	6.199
0.645161290322581		39.43	24.79	12.14	8.279	6.133
0.67741935483871		39.11	23.54	12	7.61	6.085
0.709677419354839		39.06	22.29	11.08	7.444	5.695
0.741935483870968		33.96	19.88	8.95	7.158	5.535
0.774193548387097		32.67	19.67	8.926	6.929	5.519
0.806451612903226		30.7	18.22	8.896	6.801	5.331
0.838709677419355		29.63	18.15	8.607	6.651	4.977
0.870967741935484		29.63	17.43	8.292	6.561	4.927
0.903225806451613		29.63	17.32	8.28	6.54	4.373
0.935483870967742		29.63	17.21	8.132	6.417	4.368
0.967741935483871		29.63	16.79	7.798	6.023	4.244
						1.101

0.1 248.8 143.4 49.135 22.871 15.36 3.8724

Average of yearly averages: 2.7089

Inputs generated by pe5.pl - November 2006

Data used for this run:

Output File: ChlorothalonilPAteesScenario_2

Metfile: w14751.dvf

PRZM scenario: PAturffSTD.txt

EXAMS environment file: ir298.exv

Chemical Name: Chlorothalonil

Description	Variable Name	Value	Units	Comments
Molecular weight mwt	265.9	g/mol		
Henry's Law Const.	henry	2.6e-7	atm-m^3/mol	
Vapor Pressure	vapr	5.72e-7	torr	
Solubility	sol	0.8	mg/L	
Kd	Kd	mg/L		
Koc	Koc	554	mg/L	
Photolysis half-life	kdp	0.5	days	Half-life
Aerobic Aquatic Metabolism	kbacw	1.5	days	Halfife
Anaerobic Aquatic Metabolism	kbacs	151	days	Halfife
Aerobic Soil Metabolism	asm	33	days	Halfife
Hydrolysis:	pH 7	0	days	Half-life
Method: CAM	2	integer	See PRZM manual	
Incorporation Depth:	DEPI	0	cm	
Application Rate: TAPP	12.7	kg/ha		
Application Efficiency:	APPEFF	0.99	fraction	
Spray Drift	DRFT	.064	fraction of application rate applied to pond	
Application Date	Date	15-5	dd/mm or dd/mmm or dd-mm or dd-mmm	
Interval 1	interval	14	days	Set to 0 or delete line for single app.
app. rate 1	apprate	11.2	kg/ha	
Interval 2	interval	14	days	Set to 0 or delete line for single app.
app. rate 2	apprate	8.2	kg/ha	
Interval 3	interval	7	days	Set to 0 or delete line for single app.
app. rate 3	apprate	8.2	kg/ha	
Interval 4	interval	7	days	Set to 0 or delete line for single app.
app. rate 4	apprate	8.2	kg/ha	
Interval 5	interval	7	days	Set to 0 or delete line for single app.
app. rate 5	apprate	8.2	kg/ha	
Record 17:	FILTRA			
	IPSCND1			
	UPTKF			
Record 18:	PLVKRT			
	PLDKRT			
	FEXTRC	0.5		
Flag for Index Res. Run	IR	Reservoir		
Flag for runoff calc.	RUNOFF	total	none, monthly or total(average of entire run)	

SCI-GROW OUTPUT

Chlorothalonil on Turf

Turf

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 16:49: 0

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
6.500	4.0	26.000	2.13E+02	13.0

groundwater screening cond (ppb) = 1.23E+00

Sod Farms

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 16:49: 6

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
6.500	2.0	13.000	2.13E+02	13.0

groundwater screening cond (ppb) = 6.14E-01

Golf Course

Fairways (same as turf)

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 16:49: 0

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
6.500	4.0	26.000	2.13E+02	13.0

groundwater screening cond (ppb) = 1.23E+00

Greens

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 16:49:29

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
7.300	10.0	73.000	2.13E+02	13.0

groundwater screening cond (ppb) = 3.45E+00

Tees

SciGrow version 2.3

chemical:Chlorothalonil

time is 4/ 1/2010 16:52:13

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
6.500	8.0	52.000	2.13E+02	13.0

groundwater screening cond (ppb) = 2.46E+00
